

gttgagatca caggtgccgg gcctggggcg tcgtccgtgt gtaacagcgc acccggctcc
1200
ggccccagct ctcccaacag ctcccacagc accatcgctg agaatggctt tactggctca
1260
gtccccaaca tccccactga gatgctccct cagcaccgag ccctccctct ggacagctcc
1320
cccaaccagt tcagcctcta cacgtctcct tctctgccca acatctccct agggctgcag
1380
gccacgggtca ctgtcaccaa ctcacacctc actgcctccc cgaagctgtc gacacagcag
1440
gaggccgaga ggcaggccct ccagtccctg cggcagggtg gcacgctgac cggcaagtcc
1500
atgagcacat cctctattcc tggctgcctg ctgggcgtgg cactggaggg cgacgggagc
1560
ccccacgggc atgcctccct gctgcagcat gtgctgttgc tggagcaggc ccggcagcag
1620
agcaccctca ttgctgtgcc actccacggg cagtccccac tagtgacggg tgaacgtgtg
1680
gccaccagca tgcggacggg aggaagctc ccgcggcatc ggccctgag ccgcactcag
1740
tctcaccgc tgccgcagag tccccaggcc ctgcagcagc tggatcatgca acaacagcac
1800
cagcagttcc tggagaagca gaagcagcag cagctacagc tgggcaagat cctcaccaag
1860
acaggggagc tgcccaggca gccaccacc caccctgagg agacagagga ggagctgacg
1920
gagcagcagg aggtcttgct gggggaggga gccctgacca tgccccggga gggctccaca
1980
gagagtgaga gcacacagga agacctggag gaggaggacg aggaagagga tggggaggag
2040
gaggaggatt gcatccaggt taaggacgag gagggcgaga gtggtgctga ggaggggccc
2100
gacttgagg agcctggtgc tggatacaaa aaactgttct cagatgccca gccgctgcag
2160
cctttgcagg tgtaccaggc gccctcagc ctggccactg tgccccacca ggccctgggc
2220
cgtaccagc cctccccctgc tgccccctggg ggcatagaaga gccccccaga ccagcccgtc
2280
aagcacctct tcaccacagg tgtggtctac gacacgttca tgctaaagca ccagtgcag
2340
tgcggaaca cacacgtgca ccctgagcat gctggccgga tccagagcat ctggtcccg
2400
ctgcaggaga caggcctgct tagcaagtgc gagcggatcc gaggtcgcaa agccacgcta
2460
gatgagatcc agacagtgca ctctgaatac cacaccctgc tctatgggac cagtcccctc
2520
aaccggcaga agctagacag caagaagttg ctcgccccca tcagccagaa gatgtatgct
2580
gtgctgcctt gtgggggcat cggggtggac agtgacaccg tgtggaatga gatgcactcc
2640
tccagtgtg tgccatggc agtgggctgc ctgctggagc tggccttcaa ggtggctgca
2700
ggagagctca agaattgatt tgccatcatc cggccccag gacaccacgc cgaggaatcc
2760

acagccatgg gattctgctt cttcaactct gtagccatca ccgcaaaact cctacagcag
 2820
 aagttgaacg tgggcaaggt cctcatcgtg gactgggaca ttcaccatgg caatggcacc
 2880
 cagcaggcgt tctacaatga cccctctgtg ctctacatct ctctgcatcg ctatgacaac
 2940
 gggaacttct ttccaggctc tggggctcct gaagagggtg gtggaggacc aggcgtgggg
 3000
 tacaatgtga acgtggcatg gacaggaggt gtggaccccc ccattggaga cgtggaatac
 3060
 cttacagcct tcaggacagt ggtgatgccc attgccacg agttctcacc tgatgtggtc
 3120
 ctagtctccg ctgggtttga tgctgttgaa ggacatctgt ctccactggg tggctactct
 3180
 gtcaccgcca gatgttttgg ccacttgacc aggcagctga tgaccctggc agggggccgg
 3240
 gtggtgctgg ccctggaggg aggccatgac ttgaccgcca tctgtgatgc ctctgaggct
 3300
 tgtgtctcgg ctctgctcag ttagagctg cagcccttgg atgaggcagt cttgcagcaa
 3360
 aagcccaaca tcaacgcagt ggccacgcta gagaaagtca tcgagatcca gagcaaacac
 3420
 tggagctgtg tgcagaagtt cgccgctggt ctgggcccgt ccctgcgaga ggcccaagca
 3480
 ggtgagaccg aggaggccga gactgtgagc gccatggcct tgctgtcggg gggggccgag
 3540
 caggcccagg ctgcggcagc ccgggaacac agccccaggc cggcagagga gcccatggag
 3600
 caggagcctg ccctgtgacg ccccggcccc catccctctg ggcttcacca ttgtgatttt
 3660
 gtttattttt tctattaaaa acaaaaagtc acacattcaa caagggtgtgc cgtgtgggtc
 3720
 tctcagcctt gcccctcctg ctccctctacg ctgcctcagg ccccagccc tgtggcttcc
 3780
 acctcagctc tagaagcctg ctccctctgc agggggtggt ggtgtcttcc cagccctgtc
 3840
 ccatgtgtcc ctccacccat tttcctgcat tctgtctgtc cttttcctcc ttggagcctg
 3900
 ggccagctca aggtgggcac gggggcccag acagtactct ccagttctgg ggccccccga
 3960
 gtgaggaggg aacgggaagt cgggtgccttg gtttcagctg attttggggg gaaatgcctt
 4020
 a
 4021

<210> 5544

<211> 1141

<212> PRT

<213> Homo sapiens

<400> 5544

Met Leu Leu Val Pro Lys Ala Gln Gly Leu Val Glu Met Leu Gln Thr
 1 5 10 15
 Ile Tyr Glu Thr Glu Ser Cys Phe Ser Ala Asp Gly Met Ser Gly Arg

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| | | | 20 | | | | | 25 | | | | | 30 | | | | |
| Glu | Pro | Ser | Leu | Glu | Ile | Leu | Pro | Arg | Thr | Ser | Leu | His | Ser | Ile | Pro | | |
| | | 35 | | | | | 40 | | | | | 45 | | | | | |
| Val | Thr | Val | Glu | Val | Lys | Pro | Val | Leu | Pro | Arg | Ala | Met | Pro | Ser | Ser | | |
| | 50 | | | | | 55 | | | | | 60 | | | | | | |
| Met | Gly | Gly | Gly | Gly | Gly | Gly | Ser | Pro | Ser | Pro | Val | Glu | Leu | Arg | Gly | | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | | |
| Ala | Leu | Val | Gly | Ser | Val | Asp | Pro | Thr | Leu | Arg | Glu | Gln | Gln | Leu | Gln | | |
| | | | | 85 | | | | | 90 | | | | | 95 | | | |
| Gln | Glu | Leu | Leu | Ala | Leu | Lys | Gln | Gln | Gln | Gln | Leu | Gln | Lys | Gln | Leu | | |
| | | | 100 | | | | 105 | | | | | | 110 | | | | |
| Leu | Phe | Ala | Glu | Phe | Gln | Lys | Gln | His | Asp | His | Leu | Thr | Arg | Gln | His | | |
| | 115 | | | | | | 120 | | | | | 125 | | | | | |
| Glu | Val | Gln | Leu | Gln | Lys | His | Leu | Lys | Gln | Gln | Gln | Glu | Met | Leu | Ala | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | |
| Ala | Lys | Gln | Gln | Gln | Glu | Met | Leu | Ala | Ala | Lys | Arg | Gln | Gln | Glu | Leu | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | |
| Glu | Gln | Gln | Arg | Gln | Arg | Glu | Gln | Gln | Arg | Gln | Glu | Glu | Leu | Glu | Lys | | |
| | | | 165 | | | | | | 170 | | | | | 175 | | | |
| Gln | Arg | Leu | Glu | Gln | Gln | Leu | Leu | Ile | Leu | Arg | Asn | Lys | Glu | Lys | Ser | | |
| | | 180 | | | | | | 185 | | | | | 190 | | | | |
| Lys | Glu | Ser | Ala | Ile | Ala | Ser | Thr | Glu | Val | Lys | Leu | Arg | Leu | Gln | Glu | | |
| | 195 | | | | | | 200 | | | | | 205 | | | | | |
| Phe | Leu | Leu | Ser | Lys | Ser | Lys | Glu | Pro | Thr | Pro | Gly | Gly | Leu | Asn | His | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | |
| Ser | Leu | Pro | Gln | His | Pro | Lys | Cys | Trp | Gly | Ala | His | His | Ala | Ser | Leu | | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | | |
| Asp | Gln | Ser | Ser | Pro | Pro | Gln | Ser | Gly | Pro | Pro | Gly | Thr | Pro | Pro | Ser | | |
| | | | 245 | | | | | | 250 | | | | | 255 | | | |
| Tyr | Lys | Leu | Pro | Leu | Pro | Gly | Pro | Tyr | Asp | Ser | Arg | Asp | Asp | Phe | Pro | | |
| | 260 | | | | | | | 265 | | | | | 270 | | | | |
| Leu | Arg | Lys | Thr | Ala | Ser | Glu | Pro | Asn | Leu | Lys | Val | Arg | Ser | Arg | Leu | | |
| | 275 | | | | | | 280 | | | | | 285 | | | | | |
| Lys | Gln | Lys | Val | Ala | Glu | Arg | Arg | Ser | Ser | Pro | Leu | Leu | Arg | Arg | Lys | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | |
| Asp | Gly | Thr | Val | Ile | Ser | Thr | Phe | Lys | Lys | Arg | Ala | Val | Glu | Ile | Thr | | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | | |
| Gly | Ala | Gly | Pro | Gly | Ala | Ser | Ser | Val | Cys | Asn | Ser | Ala | Pro | Gly | Ser | | |
| | | | 325 | | | | | | 330 | | | | | 335 | | | |
| Gly | Pro | Ser | Ser | Pro | Asn | Ser | Ser | His | Ser | Thr | Ile | Ala | Glu | Asn | Gly | | |
| | | 340 | | | | | | 345 | | | | | 350 | | | | |
| Phe | Thr | Gly | Ser | Val | Pro | Asn | Ile | Pro | Thr | Glu | Met | Leu | Pro | Gln | His | | |
| | 355 | | | | | | 360 | | | | | 365 | | | | | |
| Arg | Ala | Leu | Pro | Leu | Asp | Ser | Ser | Pro | Asn | Gln | Phe | Ser | Leu | Tyr | Thr | | |
| | 370 | | | | | 375 | | | | | 380 | | | | | | |
| Ser | Pro | Ser | Leu | Pro | Asn | Ile | Ser | Leu | Gly | Leu | Gln | Ala | Thr | Val | Thr | | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | | |
| Val | Thr | Asn | Ser | His | Leu | Thr | Ala | Ser | Pro | Lys | Leu | Ser | Thr | Gln | Gln | | |
| | | | 405 | | | | | | 410 | | | | | 415 | | | |
| Glu | Ala | Glu | Arg | Gln | Ala | Leu | Gln | Ser | Leu | Arg | Gln | Gly | Gly | Thr | Leu | | |
| | | 420 | | | | | | 425 | | | | 430 | | | | | |
| Thr | Gly | Lys | Phe | Met | Ser | Thr | Ser | Ser | Ile | Pro | Gly | Cys | Leu | Leu | Gly | | |
| | 435 | | | | | | 440 | | | | 445 | | | | | | |
| Val | Ala | Leu | Glu | Gly | Asp | Gly | Ser | Pro | His | Gly | His | Ala | Ser | Leu | Leu | | |

4728

| | | | | | | | | | | | | | | | |
|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|
| | | | | 885 | | | | 890 | | | | 895 | | | |
| Gln | Gln | Ala | Phe | Tyr | Asn | Asp | Pro | Ser | Val | Leu | Tyr | Ile | Ser | Leu | His |
| 900 | | | | 905 | | | | 910 | | | | | | | |
| Arg | Tyr | Asp | Asn | Gly | Asn | Phe | Phe | Pro | Gly | Ser | Gly | Ala | Pro | Glu | Glu |
| 915 | | | | 920 | | | | 925 | | | | | | | |
| Val | Gly | Gly | Gly | Pro | Gly | Val | Gly | Tyr | Asn | Val | Asn | Val | Ala | Trp | Thr |
| 930 | | | | 935 | | | | 940 | | | | | | | |
| Gly | Gly | Val | Asp | Pro | Pro | Ile | Gly | Asp | Val | Glu | Tyr | Leu | Thr | Ala | Phe |
| 945 | | | | 950 | | | | 955 | | | | 960 | | | |
| Arg | Thr | Val | Val | Met | Pro | Ile | Ala | His | Glu | Phe | Ser | Pro | Asp | Val | Val |
| 965 | | | | 970 | | | | 975 | | | | | | | |
| Leu | Val | Ser | Ala | Gly | Phe | Asp | Ala | Val | Glu | Gly | His | Leu | Ser | Pro | Leu |
| 980 | | | | 985 | | | | 990 | | | | | | | |
| Gly | Gly | Tyr | Ser | Val | Thr | Ala | Arg | Cys | Phe | Gly | His | Leu | Thr | Arg | Gln |
| 995 | | | | 1000 | | | | 1005 | | | | | | | |
| Leu | Met | Thr | Leu | Ala | Gly | Gly | Arg | Val | Val | Leu | Ala | Leu | Glu | Gly | Gly |
| 1010 | | | | 1015 | | | | 1020 | | | | | | | |
| His | Asp | Leu | Thr | Ala | Ile | Cys | Asp | Ala | Ser | Glu | Ala | Cys | Val | Ser | Ala |
| 1025 | | | | 1030 | | | | 1035 | | | | 1040 | | | |
| Leu | Leu | Ser | Val | Glu | Leu | Gln | Pro | Leu | Asp | Glu | Ala | Val | Leu | Gln | Gln |
| 1045 | | | | 1050 | | | | 1055 | | | | | | | |
| Lys | Pro | Asn | Ile | Asn | Ala | Val | Ala | Thr | Leu | Glu | Lys | Val | Ile | Glu | Ile |
| 1060 | | | | 1065 | | | | 1070 | | | | | | | |
| Gln | Ser | Lys | His | Trp | Ser | Cys | Val | Gln | Lys | Phe | Ala | Ala | Gly | Leu | Gly |
| 1075 | | | | 1080 | | | | 1085 | | | | | | | |
| Arg | Ser | Leu | Arg | Glu | Ala | Gln | Ala | Gly | Glu | Thr | Glu | Glu | Ala | Glu | Thr |
| 1090 | | | | 1095 | | | | 1100 | | | | | | | |
| Val | Ser | Ala | Met | Ala | Leu | Ser | Val | Gly | Ala | Glu | Gln | Ala | Gln | Ala | |
| 1105 | | | | 1110 | | | | 1115 | | | | 1120 | | | |
| Ala | Ala | Ala | Arg | Glu | His | Ser | Pro | Arg | Pro | Ala | Glu | Glu | Pro | Met | Glu |
| 1125 | | | | 1130 | | | | 1135 | | | | | | | |
| Gln | Glu | Pro | Ala | Leu | | | | | | | | | | | |
| 1140 | | | | | | | | | | | | | | | |

<210> 5545

<211> 1932

<212> DNA

<213> Homo sapiens

<400> 5545

nnccagttt ctcagtgtcc ctgagcctca gttttctcat ctataaataa gaatcgcttg
60

aacctggggag gcggaggttg cgctaaccaa gatcgcgcc a ttgcactcca gcctgggtga
120

caggagtgaa actctgtatc aaaaagaaat aaaaaaacga ggtcaagtag taagagaagc
180

ggtaagagtg acggaacag gaggcattga cctcttggga gaggagacat tggaggtggt
240

gatgatttgc tgaagcagcc acacacgttc agcttgtgag gacagcagtt gttaggcagg
300

ggatgagggg ggaagctggc agatctgtgc aggtgagagg tacctgtggc cttgggctca
360

tggaagtggg aggtgatggg attctaattgt gcttgggtac agtttacaaa tacaacctct
420

cttagtttgc ccaatacctc caaattcctg ggggtggcaca cctgaggttc aggtggcatg
 480
 actgagccac agtcacacat cccactgta ggataccacc acggttgggt taggttccag
 540
 cacatggcgg tcccggcctg gcctcttggg cccacctcac ctggtgacta gtgcagacca
 600
 ctctgttctt gcctgtttca ggcagcggag gaggagaaag agatggacct cccggactcg
 660
 gcctcgaggg tcttctgcgg ccgcatcctg agcatggtga acacagatga tgtcaacgcc
 720
 atcatcctgg ccagaagaa catgctggac cgctttgaga agaccaatga gatgctgctc
 780
 aacttcaaca acctgtccag tgcccgccctg cagcagatga gcgaacgctt cctgcaccac
 840
 acgaggaccc tagtagagat gaaacgggac ctggacagca tcttccgccg tatcaggacg
 900
 ctgaaagggg aactggccag gcagcaccca gaggccttca gccatatccc agaggcatcc
 960
 ttcttgaggg aagaggatga agaccccatc ccaccagca ccacgaccac cattgccacc
 1020
 tcagaacaga gcacgggctc atgtgacacc agccccgaca ccgtctcgcc ctccctgagc
 1080
 cccggcttcg aggacctgtc ccatgtccag cctggctccc cagccatcaa cggccgcagc
 1140
 cagacagatg acgaggagat gacgggcgaa tagccctgct gcccggtgcc ttgagggggg
 1200
 ctgagggcag cagcatacaa ggtggcagcg ggtaaccctg ccttgttctg tcatccaggg
 1260
 ctcttttget gccccgttct gtcacccagg gctcctaggg ggacaaggct ctctcccgag
 1320
 ggggtgtggaa ttcttggggg ggtctttaat tctggctcct tccttcctca gaacatctct
 1380
 attctgcaag acccctctgc catgccaggg cacgcccatt ccagctggag tcgtgggggt
 1440
 gggcacaggg gaatttttcc agagctgagc ctgacgtctg ctctgaagaa tgcttagaag
 1500
 gttcccagac accagagcca gatgtcccc accaccggtc aggacctcct tgagggtgcac
 1560
 aagcacggtc tcctctgagt tcacccagc ccacccccgc acccactaat tctgcttttc
 1620
 ctgccccttg ctccgtaaaa gtatcaaata ctttctcctt ggtatctcaa ggaggtttct
 1680
 gagataggta gaagtcttga gacggaggct ggccatccat tcagccctga gcgtgctgag
 1740
 ttctgtgttt ctctgaatag aggtgtggaa cctgaggggc cagcaggcct ctctgaaggc
 1800
 ctccatggag caaacggagc cacctcggga aagagtttaa tggaatatat ttgtaccgga
 1860
 tgtttacaga tgctgttggg aagttatcaa taaaaagaca ccattactaa aaagggaaaa
 1920
 gtaaaaaaaaa aa
 1932

<211> 183
 <212> PRT
 <213> Homo sapiens

<400> 5546

```

Ala Ala Glu Glu Glu Lys Glu Met Asp Leu Pro Asp Ser Ala Ser Arg
 1           5           10           15
Val Phe Cys Gly Arg Ile Leu Ser Met Val Asn Thr Asp Asp Val Asn
          20           25           30
Ala Ile Ile Leu Ala Gln Lys Asn Met Leu Asp Arg Phe Glu Lys Thr
          35           40           45
Asn Glu Met Leu Leu Asn Phe Asn Asn Leu Ser Ser Ala Arg Leu Gln
          50           55           60
Gln Met Ser Glu Arg Phe Leu His His Thr Arg Thr Leu Val Glu Met
65           70           75           80
Lys Arg Asp Leu Asp Ser Ile Phe Arg Arg Ile Arg Thr Leu Lys Gly
          85           90           95
Lys Leu Ala Arg Gln His Pro Glu Ala Phe Ser His Ile Pro Glu Ala
          100          105          110
Ser Phe Leu Glu Glu Glu Asp Glu Asp Pro Ile Pro Pro Ser Thr Thr
          115          120          125
Thr Thr Ile Ala Thr Ser Glu Gln Ser Thr Gly Ser Cys Asp Thr Ser
          130          135          140
Pro Asp Thr Val Ser Pro Ser Leu Ser Pro Gly Phe Glu Asp Leu Ser
145          150          155          160
His Val Gln Pro Gly Ser Pro Ala Ile Asn Gly Arg Ser Gln Thr Asp
          165          170          175
Asp Glu Glu Met Thr Gly Glu
          180

```

<210> 5547
 <211> 1391
 <212> DNA
 <213> Homo sapiens

<400> 5547

```

nntgtcctac ggcggacagt ttcgtaccgg cttcttctct ggggtagggg tagcctcgcc
60
cggaagcaag gcctctggaa aaccgcggcc cctgagttgc aaacaaatgt cagatcccag
120
atattaaggc taagacatac tgcatttgta ataccaaaga aaaacgttcc tacctcaaaa
180
cgtgaaactt acacagagga ttttattaaa aagcagattg aagagttcaa cataggaaaag
240
agacatttag ccaacatgat gggagaagat ccagaaaactt tcactcaaga agatattgac
300
agagctattg cttacctttt cccaagtggg ttgtttgaga aacgagccag gccagtaatg
360
aagcatcctg aacagatttt tccaagacaa agagcaatcc agtggggaga agatggccgt
420
ccatttcact atctcttcta tactggcaaa cagtcatact attcattaat gcatgatgta
480
nntatggaat gttactcaat ttagaaanaa catcaaagtc acttgcaagc caaaagtctg
540

```

cttccagaaa aaactgtaac cagagacgtg attggcagca gatggctgat taaggaggaa
 600
 ctagaagaaa tgtagtgga aaaactgtca gatctagatt atatgcagtt cattcggtg
 660
 ctagaaaagt tattgacatc gcagtgtggt gctgctgagg aagaatttgt gcagagggtt
 720
 cgaagaagtg taactcttga atcaaaaaaa cagctgattg aacctgtaca gtatgatgag
 780
 caaggaatgg cctttagcaa aagcgaaggt aaaagaaaga ctgcaaaagc agaagcaatt
 840
 gtttataaac atggaagtgg aagaataaaa gtaaattggaa ttgattacca gctttacttc
 900
 ccgatcacac aggacagaga acagctgatg ttccctttcc actttgttga ccggctggga
 960
 aagcacgacg tgacctgcac agtctcaggg ggcgggaggt cagcgcaggc tggagcaata
 1020
 cgactggcaa tggcaaaagc cttgtgcagc ttgtgcaccg aggacgaggt cgagtggatg
 1080
 agacaagctg gactacttac tactgatcca cgtgtgaggg aacggaagaa gccaggccaa
 1140
 gagggagccc gcagaaagtt tacgtggaag aaacgctaag ggtttgctcc caggaaagga
 1200
 gaggaagagc tatatatatg tgccgacatg tggcagacac acagtaaata atggctgacc
 1260
 agcatgaggg cagtactgtc agaaatttct ttgagctgtg agatggattt atttttaaat
 1320
 gctactttgt aaaggtgacc tttaaaaaat aaaaggaaaa taaagaatgt tagtttcaaa
 1380
 aaaaaaaaaa a
 1391

<210> 5548

<211> 167

<212> PRT

<213> Homo sapiens

<400> 5548

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Val | Leu | Arg | Arg | Thr | Val | Ser | Tyr | Arg | Leu | Leu | Leu | Trp | Gly | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Ser | Leu | Ala | Arg | Lys | Gln | Gly | Leu | Trp | Lys | Thr | Ala | Ala | Pro | Glu |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| Leu | Gln | Thr | Asn | Val | Arg | Ser | Gln | Ile | Leu | Arg | Leu | Arg | His | Thr | Ala |
| | | | 35 | | | | 40 | | | | 45 | | | | |
| Phe | Val | Ile | Pro | Lys | Lys | Asn | Val | Pro | Thr | Ser | Lys | Arg | Glu | Thr | Tyr |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Thr | Glu | Asp | Phe | Ile | Lys | Lys | Gln | Ile | Glu | Glu | Phe | Asn | Ile | Gly | Lys |
| 65 | | | | 70 | | | | | 75 | | | | 80 | | |
| Arg | His | Leu | Ala | Asn | Met | Met | Gly | Glu | Asp | Pro | Glu | Thr | Phe | Thr | Gln |
| | | | 85 | | | | 90 | | | | | 95 | | | |
| Glu | Asp | Ile | Asp | Arg | Ala | Ile | Ala | Tyr | Leu | Phe | Pro | Ser | Gly | Leu | Phe |
| | | | 100 | | | | 105 | | | | | 110 | | | |
| Glu | Lys | Arg | Ala | Arg | Pro | Val | Met | Lys | His | Pro | Glu | Gln | Ile | Phe | Pro |
| | 115 | | | | | 120 | | | | | 125 | | | | |
| Arg | Gln | Arg | Ala | Ile | Gln | Trp | Gly | Glu | Asp | Gly | Arg | Pro | Phe | His | Tyr |

| | | |
|---|-----|-----|
| 130 | 135 | 140 |
| Leu Phe Tyr Thr Gly Lys Gln Ser Tyr Tyr Ser Leu Met His Asp Val | | |
| 145 | 150 | 155 |
| Xaa Met Glu Cys Tyr Ser Ile | | 160 |
| 165 | | |

<210> 5549

<211> 1865

<212> DNA

<213> Homo sapiens

<400> 5549

gcgtcaccga gggccgcgca gactgcgacg gatacaggga gggcaagggt ttccttttgg
 60
 cgcttccctt tggaccccg agtgaaaaac tctaacgtcc agatcagtgg agagaaacgc
 120
 agatttagga ccctgaggag tctttttcac ccgtttcccg tcaactcgctc aggcgcgccc
 180
 agggcagtcc ttgtggggtc ctgctggcca gccaaagtgg ttgccccgc agtgaagggt
 240
 gcccgaggat ggtcgggcct ggcgttgggc gtgcggcggg ctgtcttgca gcttccaggg
 300
 ctaactcagg tgagatggag ccgctatagt cctgaattca aggatccctt gattgacaag
 360
 gaatattatc gcaagccagt ggaggagcta actgaggagg agaaatatgt tcgggagctc
 420
 aagaagactc agctcatcaa agctgctcca gcaggga aaa caagttctgt gtttgaagac
 480
 ccagtcatca gtaaattcac caacatgatg atgataggag gaaacaaagt actggccaga
 540
 tccctcatga ttcagactct ggaagctgtg aaaaggaagc agtttgagaa gtaccatgcc
 600
 gcttctgcag aggaacaggc aaccatcgaa cgcaaccctt acaccatctt ccatcaagca
 660
 ctgaaaaact gtgagcctat gattgggctg gtacccatcc tcaaggaggg ccgtttctac
 720
 caggtccttg taccctacc cgaccggcgt cgccgcttcc tagccatgaa gtggatgatc
 780
 actgagtgcc gggataaaaa gcaccagcgg aactgatgc cggagaagct gtcacacaag
 840
 ctgctggagg ctttccataa ccaggggccc gtgatcaaga ggaagcatga cttgcacaag
 900
 atggcagagg ccaaccgtgc cctggccccc taccgctggg ggtagagtct ccaggaggag
 960
 cccaggggccc tctgccgcaa gaaacagtgt gagctactgc cacgctgaaa actacctgtg
 1020
 ggttaaggat gtagttcctt tgtaaggggtg ggcaggcctc gtaagaaaga tgtagcagca
 1080
 tattcactat ccgttaatcc ttctttcttt gaggctggaa cttgctctct ctgcccctat
 1140
 ttctttgtaa agaggaggca cattgacttg ggaatttctt ccaggaaact cagggtgtt
 1200
 ttctcttccc ttaggttggg gcggaccttt ggacatataa aggaagcagt ttagtatca
 1260

gaaaagattt attagaaaat tctcacgctg aactggtgta gcatgtggtg cagcattcag
 1320
 tgaaactggc tggaggaaat aggcttggtt ccagagttgt ccttatacaa aatgtataaa
 1380
 aagcagtttc tgggtgtgact tgtgctctgc ctccaccctt tgacatccca aaatatccca
 1440
 ccagtggcta tgcttaccca ttttacagat gggtaaactg aggcaccaag gtagtagttg
 1500
 cactaatggt tacacagtgc agtggctctt gggagttgcc cttctctgcc tggccgtggt
 1560
 gggttgtggt ggggaaaggg gctcagggca ggaccacggc ataagtggga aacatctcac
 1620
 caggagatgg gaaagtctag aagggaagac actcaaagtc tggaagggaa aagtctttgg
 1680
 gtgaggcaga gactccactg ccagcttttag aggtgggtag aagaaaggcc agtgctggtg
 1740
 aggaagccct gatctggagg cctagtcgga gacttcgctg tagtaatact tgtgggcagc
 1800
 tggcgttgtc ttccagccgg ccgcccggaa ctcaatgatc tccagcagca gcagctggca
 1860
 gggcc
 1865

<210> 5550

<211> 242

<212> PRT

<213> Homo sapiens

<400> 5550

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Val | Ala | Pro | Ala | Val | Lys | Val | Ala | Arg | Gly | Trp | Ser | Gly | Leu | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Gly | Val | Arg | Ala | Val | Leu | Gln | Leu | Pro | Gly | Leu | Thr | Gln | Val | |
| | | | 20 | | | | 25 | | | | | | 30 | | |
| Arg | Trp | Ser | Arg | Tyr | Ser | Pro | Glu | Phe | Lys | Asp | Pro | Leu | Ile | Asp | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Glu | Tyr | Ser | Arg | Lys | Pro | Val | Glu | Glu | Leu | Thr | Glu | Glu | Glu | Lys | Tyr |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Arg | Glu | Leu | Lys | Lys | Thr | Gln | Leu | Ile | Lys | Ala | Ala | Pro | Ala | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Lys | Thr | Ser | Ser | Val | Phe | Glu | Asp | Pro | Val | Ile | Ser | Lys | Phe | Thr | Asn |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Met | Met | Met | Ile | Gly | Gly | Asn | Lys | Val | Leu | Ala | Arg | Ser | Leu | Met | Ile |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gln | Thr | Leu | Glu | Ala | Val | Lys | Arg | Lys | Gln | Phe | Glu | Lys | Tyr | His | Ala |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ala | Ser | Ala | Glu | Glu | Gln | Ala | Thr | Ile | Glu | Arg | Asn | Pro | Tyr | Thr | Ile |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Phe | His | Gln | Ala | Leu | Lys | Asn | Cys | Glu | Pro | Met | Ile | Gly | Leu | Val | Pro |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ile | Leu | Lys | Gly | Gly | Arg | Phe | Tyr | Gln | Val | Pro | Val | Pro | Leu | Pro | Asp |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Arg | Arg | Arg | Arg | Phe | Leu | Ala | Met | Lys | Trp | Met | Ile | Thr | Glu | Cys | Arg |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asp | Lys | Lys | His | Gln | Arg | Thr | Leu | Met | Pro | Glu | Lys | Leu | Ser | His | Lys |

| | | | | | |
|-----|---------------------|---------------------|---------------------|-----|-----|
| | 195 | | 200 | | 205 |
| Leu | Leu Glu Ala Phe His | Asn Gln Gly Pro Val | Ile Lys Arg Lys His | | |
| | 210 | 215 | 220 | | |
| Asp | Leu His Lys Met Ala | Glu Ala Asn Arg Ala | Leu Ala His Tyr Arg | | |
| 225 | | 230 | 235 | 240 | |
| Trp | Trp | | | | |

<210> 5551
 <211> 1689
 <212> DNA
 <213> Homo sapiens

<400> 5551
 ttttaaatta cattatttat ttttttagatc atccctctta gtcttgcacg cattgttagc
 60
 acaaaaagtt gaacttgatc acaacttcct ttgaagagag agtaggtaca caatgaccat
 120
 ctgaagagtt tctccacgga gggaccaaga attccagacg ctggtaacac tgtcagtaac
 180
 ctacacaact ttcaatacaa aaaaatttac caaatatcct gtttaatgta aacaaggcag
 240
 gaggcaaaac agagtattac agtaacacta ttttacaggg ccagaaaaat gtgattatct
 300
 accatgtttt aacacataaa gtgtcacaaat gacatgcata tttgatttac tacataaccc
 360
 aaaatataat taccatatag tgtgggtttta gcacttcact gtaacgtcct ctgtcaatac
 420
 tgatggactt cataattaaa tggcaattgt atgttaatgc aataatttat gaaaacatta
 480
 ccatgaattt atgaagtaat tccataattt gtgccttgta aaattaagtg taacaatggt
 540
 tacactagca acagtgtgag cgagctaaga attttggtcc ttatatatat acatatatac
 600
 atatatacac acacaataat gtacaattaa accaaaaagc tatgaatcca ctcacagctt
 660
 ccatattgca caaacagata cattacgaga aagttacata gttataagggt gagtactata
 720
 tggcaatagg ctaagacaaa tctgagttct atcaagtaaa gaatgcggct cataactaaa
 780
 aacaaatcca aagactatat tgtagaag ttttaaaaaa tgtgcatatt tattgatata
 840
 aatgtgaagc aaggctgaaa ttcacttttg aacttgctat ggcaatcaat tggtatgacg
 900
 gtgctttcca ctacgcatag tgcatttttag ttactgtttt tgcaagtact gagtaacaga
 960
 aatattcagc tgtcaacaga aggtaagaaa aactgggtgat gcagtacaat gtttcactaa
 1020
 caaattgaac tcaactgtgag agcttctact ggctctagggt ctgaaatagg gccttcagggt
 1080
 tccaaaccaa gtaaccgctt tctgactaac agaagcttgg gagtaaagtc ttgaatacgc
 1140
 tggattcgaa gcataaggtc tccaacaacc ctgacaatta cagagaagag agatctacag
 1200

ccaggagcga ggttcacgta aggatccaaa aggtactcgt ggatgtgtgg atgaggggaag
 1260
 agagaaagtc tagataacac tgagggttact tgtaagttta catcatatgg ctgatcaaga
 1320
 attcttccca ttctgtcgaa cagcactttc aaaaaatgac cttcaaagaa agcagcttct
 1380
 aaattgcact tttccaatgc ttttggagac ccaggccact cccatcttaa gcagatagca
 1440
 cagtagtctc ggaactgcct atgagcgtct cggaggtaag tgtcatatcc tgtgccctca
 1500
 acatggtagg aggattttgc gtcacccggt accagacaga gaaaactatt tacaatttta
 1560
 tgaacttcag tttttccatc atttttgggg tggctctggag tagcaggagg tgaagaacta
 1620
 agccactctt ggtttggcaa agtgttttct ggtgaaatgt cagtaaataa tggatcttct
 1680
 tccagatct
 1689

<210> 5552

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5552

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Arg | Ile | Leu | Asp | Gln | Pro | Tyr | Asp | Val | Asn | Leu | Gln | Val | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Val | Leu | Ser | Arg | Leu | Ser | Leu | Phe | Pro | His | Pro | His | Ile | His | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Tyr | Leu | Leu | Asp | Pro | Tyr | Val | Asn | Leu | Ala | Pro | Gly | Cys | Arg | Ser | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Phe | Ser | Val | Ile | Val | Arg | Val | Val | Gly | Asp | Leu | Met | Leu | Arg | Ile | Gln |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Arg | Ile | Gln | Asp | Phe | Thr | Pro | Lys | Leu | Leu | Leu | Val | Arg | Lys | Arg | Leu |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Leu | Gly | Leu | Glu | Pro | Glu | Gly | Pro | Ile | Ser | Asp | Leu | Glu | Pro | Val | Glu |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Ala | Leu | Thr | Val | Ser | Ser | Ile | Cys | | | | | | | | |
| | | | 100 | | | | | | | | | | | | |

<210> 5553

<211> 274

<212> DNA

<213> Homo sapiens

<400> 5553

ccatggatgg aggccagggt acttcaggac ctctgaagac agcaaagcag tttctggcaa
 60
 tctctgagga ggtggcattt gttccagaaa aaaggacccc ccaaccccat cccacagcct
 120
 caccagaccc taaagtcaga ataaccggcc cagctacagc ccctgcggtc gtgcttagcc
 180
 actacagagg ctgctatttc cccagccagt gtccttgga gccttgga ccaatgaagc
 240

aggctctgac acaggaatcc ctctgcatct ttat
274

<210> 5554
<211> 90
<212> PRT
<213> Homo sapiens

<400> 5554
Met Asp Gly Gly Gln Gly Thr Ser Gly Pro Leu Lys Thr Ala Lys Gln
1 5 10 15
Phe Leu Ala Ile Ser Glu Glu Val Ala Phe Val Pro Glu Lys Arg Thr
20 25 30
Pro Gln Pro His Pro Thr Ala Ser Pro Asp Pro Lys Val Arg Ile Thr
35 40 45
Gly Pro Ala Thr Ala Pro Ala Val Val Leu Ser His Tyr Arg Gly Cys
50 55 60
Tyr Phe Pro Ser Gln Cys Pro Trp Gln Pro Trp Lys Pro Met Lys Gln
65 70 75 80
Ala Leu Thr Gln Glu Ser Leu Cys Ile Phe
85 90

<210> 5555
<211> 414
<212> DNA
<213> Homo sapiens

<400> 5555
acgcgtgtgt gcacgcaggc atgggctttc agggctttca gagcaggggc cgacggcatt
60
ctccctcggg ccagcgggtca gatgtggggg tcaggaaaca aggccaggt ggggatgaat
120
cacagggctg tgattctaga agggacagct gtgagggggc gggacaggct aagctggagg
180
actcaccaga cttgcggggg tcaacacgct ccagatgtct cctagacctc tcacactcag
240
cacatccaaa cctgaaccca gcacctggcc ccacacctgt ccctgggcta gagacggggg
300
cctcagccca gctgttcccc ttctcccaca gcctctcagc tgcgtgtcgg gtccattctg
360
catcttgaac atctctccca gtggattccc ttctgctgtc ctggtccagg atcc
414

<210> 5556
<211> 115
<212> PRT
<213> Homo sapiens

<400> 5556
Met Gly Phe Gln Gly Phe Gln Ser Arg Gly Arg Arg His Ser Pro Ser
1 5 10 15
Gly Gln Arg Ser Asp Val Gly Phe Arg Lys Gln Gly Pro Gly Gly Asp
20 25 30
Glu Ser Gln Gly Cys Asp Ser Arg Arg Asp Ser Cys Glu Gly Pro Gly

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
| | 35 | | | | | | 40 | | | | | | 45 | | | | | |
| Gln | Ala | Lys | Leu | Glu | Asp | Ser | Pro | Asp | Leu | Arg | Gly | Ser | Thr | Arg | Ser | | | |
| | 50 | | | | | 55 | | | | | 60 | | | | | | | |
| Arg | Cys | Leu | Leu | Asp | Leu | Ser | His | Ser | Ala | His | Pro | Asn | Leu | Asn | Pro | | | |
| 65 | | | | | 70 | | | | 75 | | | | 80 | | | | | |
| Ala | Pro | Gly | Pro | Thr | Pro | Val | Pro | Trp | Leu | Glu | Thr | Gly | Ala | Ser | Ala | | | |
| | | | | 85 | | | 90 | | | | | | 95 | | | | | |
| Gln | Leu | Phe | Pro | Phe | Ser | His | Ser | Leu | Ser | Ala | Ala | Cys | Arg | Val | His | | | |
| | 100 | | | | | | | | 105 | | | | 110 | | | | | |
| Ser | Ala | Ser | | | | | | | | | | | | | | | | |
| | 115 | | | | | | | | | | | | | | | | | |

```
<210> 5557
<211> 1970
<212> DNA
<213> Homo sapiens
```

<400> 5557
 nnccgcgggct gggccaaggc ccgcgatggt gatctgctgt gcggccgtga actgctccaa
 60
 ccggcaggga aagggcgaga agcgcgccgt ctccctccac aggttcccc taaaggactc
 120
 aaaacgtcta atccaatggt taaaagctgt tcagagggat aactggactc ccactaagta
 180
 ttcattttctc tgtagtgagc atttcaccaa agacagcttc tccaagaggc tggaggacca
 240
 gcatcgcttg ctgaagccca cggccgtgcc atccatcttc cacctgaccg agaagaagag
 300
 gggggctgga ggccatggcc gcacccggag aaaagatgcc agcaagggca caggggggtgt
 360
 gaggggacac tcgagtgccg ccaccgcgag aggagctgca ggttggtcac cgtcctcgag
 420
 tggaaacccg atggccaagc cagagtcccg caggttgaag caagctgctc tgcaagggtga
 480
 agccacaccc agggcggccc aggagcaggt ccgaaggagc aggccagca agctcctgga
 540
 acggactcca ggagatggac tggccaccat ggtcgaggca gtcagggaaa agcagaagcg
 600
 tctgccacag atgctggcga tgagagcgcc acttcctcca tcgaaggggg cgtgacagat
 660
 aagagtggca tttctatgga tgactttacg cccccaggat ctggggcgctg caaatattatc
 720
 ggctcacttc attcgtacag tttctcctcc aagcacaccc gagaaaggcc atctgtcccc
 780
 cgagagccca ttgaccgcaa gaggctgaag aaagatgtgg aaccaagctg cagtgggagc
 840
 agcctgggac ccgacaaggg cctggcccag agccctccca gctcatcact taccgcgaca
 900
 cggcagaagc cttcccagag cccctctgcc cctcctgccg acgtcacccc aaagccagcc
 960
 acggaagccg tgcagagcga gcacagcgac gccagcccca tgtocatcaa cgaggtcatc
 1020
 ctgtcggcgt caggggcctg caagctcatc gactcactgc actcctactg cttctcctcc
 1080

cggcagaaca agagccaggt gtgctgctg cgggagcagg tggagaagaa gaacggcgag
 1140
 ctgaagagcc tgcggcagag ggtcagccgc tccgacagcc aggtgcggaa gctacaggag
 1200
 aagctggatg agctgaggag agtgagcgtc cccatatacaa gtagcctgct gtcgcccagc
 1260
 cgcgagcccc ccaagatgaa cccagtgggtg gagccactgt cctggatgct gggcacctgg
 1320
 ctgtcggacc cacctggagc cgggacctac cccacactgc agcccttcca gtacctggag
 1380
 gaggttcaca tctcccacgt gggccagccc atgctgaact tctcgttcaa ctccctccac
 1440
 ccggacacgc gcaagccgat gcacagagag tgtggcttca ttcgcctcaa gcccagacacc
 1500
 aacaaggtgg cctttgtcag cggccagaac acaggcgtgg tggaaagtga ggagggcgag
 1560
 gtgaacgggc aggagctgtg catcgcaccc cactccatcg ccaggatctc cttcgccaag
 1620
 gagccccacg tagagcagat cacccggaag ttcaggctga attctgaagg caaacttgag
 1680
 cagacgggtct ccatggcaac cacgacacag ccaatgactc agcatcttca cgtcacctac
 1740
 aagaaggtga ccccgtaaac ctagagcttc tggagccctc gggagggcct ggctactgtg
 1800
 cctcaacgggt tcggctcctc aacagacagt ccctgcggca gaagtgggtg tggccgtgag
 1860
 cctctgcagg ctcaagagtg ttgtccagat gtttctgtac tggcatagaa aaaccaaata
 1920
 aaaggccttt atttttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1970

<210> 5558

<211> 360

<212> PRT

<213> Homo sapiens

<400> 5558

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Asp | Phe | Thr | Pro | Pro | Gly | Ser | Gly | Ala | Cys | Lys | Phe | Ile | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Leu | His | Ser | Tyr | Ser | Phe | Ser | Ser | Lys | His | Thr | Arg | Glu | Arg | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Val | Pro | Arg | Glu | Pro | Ile | Asp | Arg | Lys | Arg | Leu | Lys | Lys | Asp | Val |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Glu | Pro | Ser | Cys | Ser | Gly | Ser | Ser | Leu | Gly | Pro | Asp | Lys | Gly | Leu | Ala |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Gln | Ser | Pro | Pro | Ser | Ser | Ser | Leu | Thr | Ala | Thr | Arg | Gln | Lys | Pro | Ser |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Gln | Ser | Pro | Ser | Ala | Pro | Pro | Ala | Asp | Val | Thr | Pro | Lys | Pro | Ala | Thr |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Glu | Ala | Val | Gln | Ser | Glu | His | Ser | Asp | Ala | Ser | Pro | Met | Ser | Ile | Asn |
| | | | 100 | | | | 105 | | | | | | 110 | | |
| Glu | Val | Ile | Leu | Ser | Ala | Ser | Gly | Ala | Cys | Lys | Leu | Ile | Asp | Ser | Leu |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| His | Ser | Tyr | Cys | Phe | Ser | Ser | Arg | Gln | Asn | Lys | Ser | Gln | Val | Cys | Cys |

| | | | | |
|---|---|-----|--|-----|
| 130 | | 135 | | 140 |
| Leu Arg Glu Gln Val | Glu Lys Lys Asn Gly Glu Leu Lys Ser Leu Arg | | | |
| 145 | 150 | 155 | | 160 |
| Gln Arg Val Ser Arg Ser Asp Ser Gln Val Arg Lys Leu Gln Glu Lys | | | | |
| | 165 | 170 | | 175 |
| Leu Asp Glu Leu Arg Arg Val Ser Val Pro Tyr Pro Ser Ser Leu Leu | | | | |
| | 180 | 185 | | 190 |
| Ser Pro Ser Arg Glu Pro Pro Lys Met Asn Pro Val Val Glu Pro Leu | | | | |
| | 195 | 200 | | 205 |
| Ser Trp Met Leu Gly Thr Trp Leu Ser Asp Pro Pro Gly Ala Gly Thr | | | | |
| | 210 | 215 | | 220 |
| Tyr Pro Thr Leu Gln Pro Phe Gln Tyr Leu Glu Glu Val His Ile Ser | | | | |
| | 225 | 230 | | 235 |
| His Val Gly Gln Pro Met Leu Asn Phe Ser Phe Asn Ser Phe His Pro | | | | |
| | 245 | 250 | | 255 |
| Asp Thr Arg Lys Pro Met His Arg Glu Cys Gly Phe Ile Arg Leu Lys | | | | |
| | 260 | 265 | | 270 |
| Pro Asp Thr Asn Lys Val Ala Phe Val Ser Ala Gln Asn Thr Gly Val | | | | |
| | 275 | 280 | | 285 |
| Val Glu Val Glu Glu Gly Glu Val Asn Gly Gln Glu Leu Cys Ile Ala | | | | |
| | 290 | 295 | | 300 |
| Ser His Ser Ile Ala Arg Ile Ser Phe Ala Lys Glu Pro His Val Glu | | | | |
| | 305 | 310 | | 315 |
| Gln Ile Thr Arg Lys Phe Arg Leu Asn Ser Glu Gly Lys Leu Glu Gln | | | | |
| | 325 | 330 | | 335 |
| Thr Val Ser Met Ala Thr Thr Thr Gln Pro Met Thr Gln His Leu His | | | | |
| | 340 | 345 | | 350 |
| Val Thr Tyr Lys Lys Val Thr Pro | | | | |
| | 355 | 360 | | |

<210> 5559

<211> 3866

<212> DNA

<213> Homo sapiens

<400> 5559

```

nnaattcgag gatccgggta ccatggcaca gagcgacaga gacatttatt gttatttgtt
60
ttttggtggc aaaaagggaa aatggcgaaac gactcccctg caaaaagtct ggtggacatc
120
gacctctcct ccctgcggga tcctgctggg atttttgagc tgggtggaagt ggttggaat
180
ggcacctatg gacaagtcta taagggtcga catgttaaaa cgggtcagtt ggcagccatc
240
aaagtatatg atgtcactga ggatgaagag gaagaaatca aactggagat aaatatgcta
300
aagaaatact ctcatcacag aaacattgca acatattatg gtgctttcat caaaaagagc
360
cctccaggac atgatgacca actctggctt gttatggagt tctgtggggc tgggtccatt
420
acagaccttg tgaagaacac caaagggaaac aactcaaag aagactggat cgcttacatc
480
tccagagaaa tcctgagggg actggcacat cttcacattc atcatgtgat tcaccgggat
540

```

atcaagggcc agaatgtgtt gctgactgag aatgcagagg tgaaacttgt tgacttttgt
600
gtgagtgtc agctggacag gactgtgggg cgagaaata cgttcatagg cactccctac
660
tgatggctc ctgaggtcat cgctgtgat gagaaccag atgccaccta tgattacaga
720
agtgtcttt ggtcttgtg cattacagcc attgagatgg cagaagggtc tccccctctc
780
tgtgacatgc atccaatgag agcactgttt ctcatccca gaaaccctcc tccccggctc
840
aagtccaaga agtggctgaa gaagttcatt gacttcattg acacatgtct catcaagact
900
tacatgcagc ggcccaccac ggagcagctt ttgaagtttc cttttataag ggatcagccc
960
acggagcggc aggtccgcat ccagcttaag gatcatatag atcgtaccag gaagaagcgg
1020
ggtgagaaag aggagacaga atatgagtac agcggcagcg aggaggaaga tgacagccat
1080
ggagaggaag gagagccaag ttccatcatg aacgtgcctg gagagtctac tcttcgccga
1140
gatttcctga gactgcagca ggagaacaag gaacgttccg aggctcttcg gagacaacag
1200
ttactacagg agcaacagct ccgggagcag gaagaatata aaaggcaact gctggcagag
1260
agacagaagc ggattgagca gcagaaagaa cagaggcgac ggctagaaga gcaacaaagg
1320
agagagcggg aggctagaag gcagcaggaa cgtgaacagc gaaggagaga acaagaagaa
1380
aagaggcgtc tagaggagtt ggagagaagg cgcaaagaag aagaggagag gagacgggca
1440
gaagaagaaa agaggagagt tgaaagagaa caggagtata tcaggcgaca gctagaagag
1500
gagcagcggc acttggaagt ccttcagcag cagctgctcc aggagcaggc catgttactg
1560
catgaccata ggaggccgca ccgcagcac tcgcagcagc cgccaccacc gcagcaggaa
1620
aggagcaagc caagcttcca tgctcccgag cccaaagccc actacgagcc tgctgaccga
1680
gcgcgagagg ttctgtgag aacaacatct cgctcccctg ttctgtcccg tcgagattcc
1740
ccactgcagg gcagtgggca gcagaatagc caggcaggac agagaaactc caccagcagt
1800
attgagccca ggcttctgtg ggagagagtg gagaagctgg tgcccagacc tggcagtggc
1860
agctcctcag ggtccagcaa ctccagatcc cagcccgggt ctaccctgg gtctcagagt
1920
ggctccgggg aacgcttcag agtgagatca tcatccaagt ctgaaggctc tccatctcag
1980
cgctggaaa atgcagtga aaaacctgaa gataaaaagg aagttttcag acccctcaag
2040
cctgctggcg aagtggatct gaccgcactg gccaaagagc ttcgagcagt ggaagatgta
2100
cggccacctc acaaagtaac ggactactcc tcatccagtg aggagtccgg gacgacggat
2160

gaggaggacg acgatgtgga gcaggaaggg gctgacgagt ccacctcagg accagaggac
2220
accagagcag cgtcatctct gaatttgagc aatgggtgaaa cggaatctgt gaaaaccatg
2280
attgtccatg atgatgtaga aagttagccg gccatgaccc catccaagga gggcactcta
2340
atcgcccgcc agactcagtc cgctagtagc acactccaga aacacaaatc ttctctctcc
2400
tttacacctt ttatagaccc cagattacta cagattttctc catctagcgg aacaacagtg
2460
acatctgtgg tgggattttc ctgtgatggg atgagaccag aagccataag gcaagatcct
2520
acccggaaag gctcagtggt caatgtgaat cctaccaaca ctaggccaca gagtgcaccc
2580
ccggagattc gtaaatacaa gaagagggtt aactctgaga ttctgtgtgc tgccttatgg
2640
ggagtgaatt tgctagtggg tacagagagt ggcctgatgc tgctggacag aagtggccaa
2700
gggaagggtct atcctcttat caaccgaaga cgatttcaac aaatggacgt acttgagggc
2760
ttgaatgtct tggtgacaat atctggcaaa aaggataagt tacgtgtcta ctatttgtcc
2820
tggttaagaa ataaaatact tcacaatgat ccagaagttg agaagaagca gggatggaca
2880
accgtagggg atttggaagg atgtgtacat tataaagttg taaaatatga aagaatcaaa
2940
tttctgggtga ttgctttgaa gaggttctgt gaagtctatg cgtgggcacc aaagccatat
3000
cacaaattta tggcctttaa gtcatttgga gaattggtac ataagccatt actggtggat
3060
ctcactgttg aggaaggcca gaggttgaaa gtgatctatg gatcctgtgc tggattccat
3120
gctgttgatg tggattcagg atcagtctat gacatttatc taccaacaca tgtaagaaag
3180
aaccacact ctatgatcca gtgtagcatc aaaccccatg caatcatcat cctccccaat
3240
acagatggaa tggagcttct ggtgtgctat gaagatgagg gggtttatgt aaacacatat
3300
ggaaggatca ccaaggatgt agttctacag tggggagaga tgcttacatc agtagcatat
3360
attcgatcca atcagacaat gggctgggga gagaaggcca tagagatccg atctgtggaa
3420
actggtcact tggatggtgt gttcatgcac aaaagggctc aaagactaaa attcttgtgt
3480
gaacgcaatg acaagggtgt ctttgccctc gttcgggtctg gtggcagcag tcaggtttat
3540
ttcatgacct taggcaggac ttctcttctg agctggtaga agcagtgtga tccagggatt
3600
actggcctcc agagtcttca agatcctgag aacttggaat tccttgtaac tggagctcgg
3660
agctgcaccg agggcaacca ggacagctgt gtgtgcagac ctcatgtgtt gggttctctc
3720
ccctccttcc tgttctctt atataccagt ttatcccat tctttttttt tttcttactc
3780

caaaataaat caaggctgca atgcagctgg tgctgttcag attccaaaaa aaaaaaaaaa
 3840
 ccatgggtacc cggatcctcg aattcc
 3866

<210> 5560

<211> 1165

<212> PRT

<213> Homo sapiens

<400> 5560

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Asn | Asp | Ser | Pro | Ala | Lys | Ser | Leu | Val | Asp | Ile | Asp | Leu | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Leu | Arg | Asp | Pro | Ala | Gly | Ile | Phe | Glu | Leu | Val | Glu | Val | Val | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asn | Gly | Thr | Tyr | Gly | Gln | Val | Tyr | Lys | Gly | Arg | His | Val | Lys | Thr | Gly |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Gln | Leu | Ala | Ala | Ile | Lys | Val | Met | Asp | Val | Thr | Glu | Asp | Glu | Glu | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Ile | Lys | Leu | Glu | Ile | Asn | Met | Leu | Lys | Lys | Tyr | Ser | His | His | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Asn | Ile | Ala | Thr | Tyr | Gly | Ala | Phe | Ile | Lys | Lys | Ser | Pro | Pro | Gly | |
| | | | | 85 | | | | 90 | | | | | 95 | | |
| His | Asp | Asp | Gln | Leu | Trp | Leu | Val | Met | Glu | Phe | Cys | Gly | Ala | Gly | Ser |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ile | Thr | Asp | Leu | Val | Lys | Asn | Thr | Lys | Gly | Asn | Thr | Leu | Lys | Glu | Asp |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Trp | Ile | Ala | Tyr | Ile | Ser | Arg | Glu | Ile | Leu | Arg | Gly | Leu | Ala | His | Leu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| His | Ile | His | His | Val | Ile | His | Arg | Asp | Ile | Lys | Gly | Gln | Asn | Val | Leu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Leu | Thr | Glu | Asn | Ala | Glu | Val | Lys | Leu | Val | Asp | Phe | Gly | Val | Ser | Ala |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Gln | Leu | Asp | Arg | Thr | Val | Gly | Arg | Arg | Asn | Thr | Phe | Ile | Gly | Thr | Pro |
| | | | 180 | | | | 185 | | | | | | 190 | | |
| Tyr | Trp | Met | Ala | Pro | Glu | Val | Ile | Ala | Cys | Asp | Glu | Asn | Pro | Asp | Ala |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Thr | Tyr | Asp | Tyr | Arg | Ser | Asp | Leu | Trp | Ser | Cys | Gly | Ile | Thr | Ala | Ile |
| | | 210 | | | | 215 | | | | | 220 | | | | |
| Glu | Met | Ala | Glu | Gly | Ala | Pro | Pro | Leu | Cys | Asp | Met | His | Pro | Met | Arg |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Leu | Phe | Leu | Ile | Pro | Arg | Asn | Pro | Pro | Pro | Arg | Leu | Lys | Ser | Lys |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Lys | Trp | Ser | Lys | Lys | Phe | Ile | Asp | Phe | Ile | Asp | Thr | Cys | Leu | Ile | Lys |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Thr | Tyr | Met | Gln | Arg | Pro | Thr | Thr | Glu | Gln | Leu | Leu | Lys | Phe | Pro | Phe |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Ile | Arg | Asp | Gln | Pro | Thr | Glu | Arg | Gln | Val | Arg | Ile | Gln | Leu | Lys | Asp |
| | | 290 | | | | 295 | | | | | 300 | | | | |
| His | Ile | Asp | Arg | Thr | Arg | Lys | Lys | Arg | Gly | Glu | Lys | Glu | Glu | Thr | Glu |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Tyr | Glu | Tyr | Ser | Gly | Ser | Glu | Glu | Glu | Asp | Asp | Ser | His | Gly | Glu | Glu |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Gly | Glu | Pro | Ser | Ser | Ile | Met | Asn | Val | Pro | Gly | Glu | Ser | Thr | Leu | Arg |

4744

| | | | | |
|---|--|------|--|------|
| 770 | | 775 | | 780 |
| Ile Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly Phe Ser | | | | |
| 785 | | 790 | | 795 |
| Cys Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr Arg Lys | | | | 800 |
| | | 805 | | 810 |
| | | | | 815 |
| Gly Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln Ser Asp | | | | |
| | | 820 | | 825 |
| | | | | 830 |
| Thr Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu Ile Leu | | | | |
| | | 835 | | 840 |
| | | | | 845 |
| Cys Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu Ser Gly | | | | |
| | | 850 | | 855 |
| | | | | 860 |
| Leu Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro Leu Ile | | | | |
| | | 865 | | 870 |
| | | | | 875 |
| Asn Arg Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu Asn Val | | | | |
| | | 885 | | 890 |
| | | | | 895 |
| Leu Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr Tyr Leu | | | | |
| | | 900 | | 905 |
| | | | | 910 |
| Ser Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val Glu Lys | | | | |
| | | 915 | | 920 |
| | | | | 925 |
| Lys Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val His Tyr | | | | |
| | | 930 | | 935 |
| | | | | 940 |
| Lys Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala Leu Lys | | | | |
| | | 945 | | 950 |
| | | | | 955 |
| Ser Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His Lys Phe | | | | |
| | | 965 | | 970 |
| | | | | 975 |
| Met Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu Leu Val | | | | |
| | | 980 | | 985 |
| | | | | 990 |
| Asp Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile Tyr Gly Ser | | | | |
| | | 995 | | 1000 |
| | | | | 1005 |
| Cys Ala Gly Phe His Ala Val Asp Val Asp Ser Gly Ser Val Tyr Asp | | | | |
| | | 1010 | | 1015 |
| | | | | 1020 |
| Ile Tyr Leu Pro Thr His Val Arg Lys Asn Pro His Ser Met Ile Gln | | | | |
| | | 1025 | | 1030 |
| | | | | 1035 |
| Cys Ser Ile Lys Pro His Ala Ile Ile Ile Leu Pro Asn Thr Asp Gly | | | | |
| | | 1045 | | 1050 |
| | | | | 1055 |
| Met Glu Leu Leu Val Cys Tyr Glu Asp Glu Gly Val Tyr Val Asn Thr | | | | |
| | | 1060 | | 1065 |
| | | | | 1070 |
| Tyr Gly Arg Ile Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro | | | | |
| | | 1075 | | 1080 |
| | | | | 1085 |
| Thr Ser Val Ala Tyr Ile Arg Ser Asn Gln Thr Met Gly Trp Gly Glu | | | | |
| | | 1090 | | 1095 |
| | | | | 1100 |
| Lys Ala Ile Glu Ile Arg Ser Val Glu Thr Gly His Leu Asp Gly Val | | | | |
| | | 1105 | | 1110 |
| | | | | 1115 |
| Phe Met His Lys Arg Ala Gln Arg Leu Lys Phe Leu Cys Glu Arg Asn | | | | |
| | | 1125 | | 1130 |
| | | | | 1135 |
| Asp Lys Val Phe Ala Ser Val Arg Ser Gly Gly Ser Ser Gln Val | | | | |
| | | 1140 | | 1145 |
| | | | | 1150 |
| Tyr Phe Met Thr Leu Gly Arg Thr Ser Leu Leu Ser Trp | | | | |
| | | 1155 | | 1160 |
| | | | | 1165 |

<210> 5561

<211> 2089

<212> DNA

<213> Homo sapiens

<400> 5561

tctagagcag gtgcgcggct gcaccggcag ccgcgggaag ctcgggccgg caggggtttcc
60
ccgcacgctg gcgcccagct cccggcgcgaggccgctgt aagtttcgct ttccattcag
120
tganaaacga aagctgggag ggggtgccacg agcgcggggc cagaccaagg cgggcccggga
180
gcggaacttc ggtcccagct cgggtccccgg ctcaagtccg acgtggaact cagcagcggga
240
ggctggacgc ttgcatggcg cttgagagat tccatcgtgc ctgggtcaca taagcgcttc
300
ctggaagtga agtcgtgctg tcctgaacgc gggccaggca gctgcggcct ggggggttttg
360
gagtgatcac gaatgagcaa ggcgtttggg ctcttgaggc aaatctgtca gtccatcctg
420
gctgagtcct cgcagtcccc ggcagatcct gaagaaaaga aggaagaaga cagcaacatg
480
aagagagagc agcccagaga gcgtcccagg gcctgggact accctcatgg cctgggttgg
540
ttacacaaca ttggacagac ctgctgcctt aactccttga ttcagggtgt cgtaatgaat
600
gtggacttca ccaggatatt gaagaggatc acggtgcca ggggagctga cgagcagagg
660
agaagcgtcc ctttccagat gcttctgctg ctggagaaga tgcaggacag ccggcagaaa
720
gcagtgcggc ccctggagct ggcctactgc ctgcagaagt gcaacgtgcc cttgtttgtc
780
caacatgatg ctgcccact gtacctcaa ctctggaacc tgattaagga ccagatcact
840
gatgtgact tgggtggagag actgcaggcc ctgtatacga tccgggtgaa ggactccttg
900
atttgcttg actgtgccat ggagagtagc agaaacagca gcatgctcac cctcccactt
960
tctctttttg atgtggactc aaagcccctg aagacactgg aggacgcct gcactgcttc
1020
ttccagccca gggagttatc aagcaaaagc aagtgttct gtgagaactg tgggaagaag
1080
accgtggga aacaggtctt gaagctgacc ctttgcccc agaccctgac aatccacctc
1140
atgcgattct ccatcaggaa ttcacagacg agaaagatct gccactccct gtacttcccc
1200
cagagcttgg atttcagcca gatccttcca atgaagcgag agtcttgtga tgctgaggag
1260
cagtctggag ggcagtatga gctttttgct gtgattgcgc acgtgggaat ggcagactcc
1320
ggtcattact gtgtctacat ccggaatgct gtggatggaa aatggttctg cttcaatgac
1380
tccaatattt gcttgggtgc ctgggaagac atccagtgt cctacggaaa tcctaactac
1440
cactggcagg aaactgcata tcttctgggt tacatgaaga tggagtgtga atggaaatgc
1500
ccaaaacctt cagagattga cagctgtca ttttccattt ccgttcttg atctacggag
1560

tcttctaaga gattttgcaa tgaggagaag cattgttttc aaactatata actgagcctt
 1620
 atttataatt agggatatta tcaaaatatg taaccatgag gcccctcagg tcctgatcag
 1680
 tcagaatgga tgctttcacc agcagacccg gccatgtggc tgctcgggcc tgggtgctcg
 1740
 ctgctgtgcg agacattagc cctttagtta tgagcctgtg ggaacttcag gggttcccag
 1800
 tggggagagc agtggcagtg ggaggcatct gggggccaaa ggtcagtggc aggggggtatt
 1860
 tcagtattat acaactgctg tgaccagact tgtatactgg ccgaatatca gtgctgtttg
 1920
 taatttttca ctttgagaac caacattaat tccatatgaa tcaagtgttt tgtaactgct
 1980
 attcatttat tcagcaaata tttattgatc atctcttctc cataagatag tgtgataaac
 2040
 acagtcatga ataaagtatt tttccacaaa aaaaaaaaaa aaaaaaaaaa
 2089

<210> 5562

<211> 372

<212> PRT

<213> Homo sapiens

<400> 5562

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Lys | Ala | Phe | Gly | Leu | Leu | Arg | Gln | Ile | Cys | Gln | Ser | Ile | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Glu | Ser | Ser | Gln | Ser | Pro | Ala | Asp | Leu | Glu | Glu | Lys | Lys | Glu | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asp | Ser | Asn | Met | Lys | Arg | Glu | Gln | Pro | Arg | Glu | Arg | Pro | Arg | Ala | Trp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asp | Tyr | Pro | His | Gly | Leu | Val | Gly | Leu | His | Asn | Ile | Gly | Gln | Thr | Cys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Cys | Leu | Asn | Ser | Leu | Ile | Gln | Val | Phe | Val | Met | Asn | Val | Asp | Phe | Thr |
| 65 | | | | | 70 | | | | 75 | | | | | | 80 |
| Arg | Ile | Leu | Lys | Arg | Ile | Thr | Val | Pro | Arg | Gly | Ala | Asp | Glu | Gln | Arg |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Arg | Ser | Val | Pro | Phe | Gln | Met | Leu | Leu | Leu | Leu | Glu | Lys | Met | Gln | Asp |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ser | Arg | Gln | Lys | Ala | Val | Arg | Pro | Leu | Glu | Leu | Ala | Tyr | Cys | Leu | Gln |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Lys | Cys | Asn | Val | Pro | Leu | Phe | Val | Gln | His | Asp | Ala | Ala | Gln | Leu | Tyr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Leu | Lys | Leu | Trp | Asn | Leu | Ile | Lys | Asp | Gln | Ile | Thr | Asp | Val | His | Leu |
| 145 | | | | 150 | | | | | 155 | | | | | | 160 |
| Val | Glu | Arg | Leu | Gln | Ala | Leu | Tyr | Thr | Ile | Arg | Val | Lys | Asp | Ser | Leu |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Ile | Cys | Val | Asp | Cys | Ala | Met | Glu | Ser | Ser | Arg | Asn | Ser | Ser | Met | Leu |
| | | 180 | | | | | 185 | | | | | 190 | | | |
| Thr | Leu | Pro | Leu | Ser | Leu | Phe | Asp | Val | Asp | Ser | Lys | Pro | Leu | Lys | Thr |
| | | 195 | | | | 200 | | | | | | 205 | | | |
| Leu | Glu | Asp | Ala | Leu | His | Cys | Phe | Phe | Gln | Pro | Arg | Glu | Leu | Ser | Ser |
| | 210 | | | | 215 | | | | | | 220 | | | | |
| Lys | Ser | Lys | Cys | Phe | Cys | Glu | Asn | Cys | Gly | Lys | Lys | Thr | Arg | Gly | Lys |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 225 | | 230 | | 235 | | 240 | | | | | | | | | |
| Gln | Val | Leu | Lys | Leu | Thr | His | Leu | Pro | Gln | Thr | Leu | Thr | Ile | His | Leu |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Met | Arg | Phe | Ser | Ile | Arg | Asn | Ser | Gln | Thr | Arg | Lys | Ile | Cys | His | Ser |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Leu | Tyr | Phe | Pro | Gln | Ser | Leu | Asp | Phe | Ser | Gln | Ile | Leu | Pro | Met | Lys |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Arg | Glu | Ser | Cys | Asp | Ala | Glu | Gln | Ser | Gly | Gly | Gln | Tyr | Glu | Leu | |
| | 290 | | | | | 295 | | | | 300 | | | | | |
| Phe | Ala | Val | Ile | Ala | His | Val | Gly | Met | Ala | Asp | Ser | Gly | His | Tyr | Cys |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Val | Tyr | Ile | Arg | Asn | Ala | Val | Asp | Gly | Lys | Trp | Phe | Cys | Phe | Asn | Asp |
| | | | 325 | | | | | 330 | | | | | | 335 | |
| Ser | Asn | Ile | Cys | Leu | Val | Ser | Trp | Glu | Asp | Ile | Gln | Cys | Thr | Tyr | Gly |
| | | 340 | | | | | | 345 | | | | 350 | | | |
| Asn | Pro | Asn | Tyr | His | Trp | Gln | Glu | Thr | Ala | Tyr | Leu | Leu | Val | Tyr | Met |
| | 355 | | | | | 360 | | | | | 365 | | | | |
| Lys | Met | Glu | Cys | | | | | | | | | | | | |
| | 370 | | | | | | | | | | | | | | |

<210> 5563

<211> 2878

<212> DNA

<213> Homo sapiens

<400> 5563

```

nagtcaggca gcgaggagccg ccgggagcgg atggcgccgg ccgtagcggc tccactcgcc
60
gccgggggtg aggaggcggc agccacgacc tccgtgcccg ggtctccagg tctgcccggg
120
agacgcagtg cagagcgggc cctagaggag gccgtggcca ccgggaccct gaacctgtct
180
aaccggcgct tgaagcactt cccccggggc gcgggccgta gctacgacct gtcagacatc
240
accagggctg acctgtcccg gaaccggttt ccgaggtgc ccgaggcggc gtgccagctg
300
gtgtcccttg agggcctgag cctctaccac aattgcctga gatgcctgaa ccagccttg
360
gggaatctca cagccctcac ctacctcaac ctacgcgaa accagctgtc gctgctgcca
420
ccctacatct gccagctgcc cctgaggggtc ctcatcgtca gcaacaacaa gctgggagcc
480
ctgccccctg acatcggcac cctgggaagc ctgcgacagc ttgacgtgag cagcaacgag
540
ctccaatccc tgccctcgga actgtgtggc ctctcttccc tgccgggacct caatgtccgg
600
aggaaccagc tcagtacgct gccgaagag ctgggggacc tccctctggt ccgcctggat
660
ttctcctgta accgcgtctc ccgaatccca gtctccttct gccgcctgag gcacctgcag
720
gtcattctgc tggacagcaa ccctctgcag agtccacctg ccaggtctg cctgaagggg
780
aaacttcaca tcttcaagta tttgtccaca gaggccgggc agcgtgggtc ggccctgggg
840

```

gacctggccc cttctcggcc cccgagtttc agtccctgcc ctgcagagga tctatttccg
900
ggacatcggg acgatgggtg gctggactca ggcttccaca gcgttgatag tggcagcaag
960
aggtgggtctg gaaatgagtc aacagatgaa ttttcagagc tgtcattccg gatctcagag
1020
ctggccccggg agccccgggg gccagagaa cgcaaggagg atggctcagc ggacggagac
1080
cctgtgcaga ttgacttcat cgacagccat gtccccgggg aggatgaaga gcgaggcact
1140
gtggaggagc agcgaccacc cgaattaagc cctggggcag gggacagga gagggcacca
1200
agcagcaggc gggaggagcc ggcaggggag gagcggcggc gcccgacac cttgcagctg
1260
tggcaggagc gggaacggcg gcagcagcag cagagcgggg cgtggggggc cccgaggaag
1320
gatagcctct tgaagccagg gctcagggtt gttgtgggag gggccgccgc cgtgtccact
1380
caagccatgc acaacggctc gcctaagtcc agtgccctcc aagcaggggg ctgcagcggg
1440
gcagggagcc ccgcccctgc ccctgcctcc caagagcccc ttcccatagc tggaccagcg
1500
acagcacctg ctccacggcc acttggctcc attcagagac caaacagctt cctcttccgt
1560
tcctcctctc agagtggctc aggcccttcc tcaccagact ctgtcctgag acctcggcgg
1620
tacccccagg ttccagatga gaaggactta atgactcagc tgcgccaggc ccttgagtcc
1680
cggtgcagc ggcccctgcc tgaggacctg gccgaggctc tggccagtgg ggtcactctg
1740
tgccagctgg ccaaccagct acggccgcgc tccgtgccct tcatccatgt gccctcccct
1800
gctgtgcaa aactcagtgc cctcaaggct cggaagaatg tggagagttt tctagaagcc
1860
tgtcgaaaaa tgggggtgcc tgaggctgac ctgtgctcgc cctcgatct cctccagggc
1920
actgcccggg ggctgcggac cgcgctggag gccgtgaagc gggtaggggg caaggcccta
1980
ccgcccctct gggccccctc tggctcgggc ggcttcgtcg tcttctacgt ggtcctcatg
2040
ctgctgctct atgtcaccta cactcggctc ctgggttccct agggcccaaa atcgccctc
2100
cctcaccct ttcccttct ctctatttat aaggccctg ctccaccga cccacctgc
2160
ggtgccttca gccccaaaca aagacactag tgcacccct tcacagacac tgacctcaga
2220
ggccccactc tgggtgcccc agaccctggg ccccgagcct ctggcctccc tccagtagcc
2280
ccacgagtcc ccacctctca gtgctgacgg tgccttcatg tccccgccgg cctgcccct
2340
gccctctgta ccccgtaggg ggtggcagga gctggagtct ccccttccct cctgtgcct
2400
ccccttcccc ccccaacagc tgctatgggg gggctaaatt atctctattt tgtagagagg
2460

atctatatatt gtaggggttc ggggcccagg ccgggtccct atctctgtgt ataaactgta
 2520
 cagaccgtgg ccgccctgcc tgtgtgtgtg tgtgtgcgcg cgcgcgcgcg tctgctccgt
 2580
 gtgttggtgg ctgtggccat ggctctgtgc ccaccagcat ctccctcctg agatgccggc
 2640
 ctctcatgct cccggagcgt ccgccaaccc cccgtgtcac ctcccttctg ttatcgctga
 2700
 cagctttctt gcgtctcatt tgtcgccgag ccccgagcgc acggtgatgc tcgggtctgc
 2760
 ccccgacccc ctgccacagg ccggaagccg cagggggcac cgtggggaag ctaaccggc
 2820
 cccttcccc aggagtcact gtgccagccc caccacatcc tggaagagga ggaggcct
 2878

<210> 5564

<211> 683

<212> PRT

<213> Homo sapiens

<400> 5564

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Ala | Ala | Val | Ala | Ala | Pro | Leu | Ala | Ala | Gly | Gly | Glu | Glu | Ala |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Ala | Ala | Thr | Thr | Ser | Val | Pro | Gly | Ser | Pro | Gly | Leu | Pro | Gly | Arg | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Ala | Glu | Arg | Ala | Leu | Glu | Glu | Ala | Val | Ala | Thr | Gly | Thr | Leu | Asn |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Leu | Ser | Asn | Arg | Arg | Leu | Lys | His | Phe | Pro | Arg | Gly | Ala | Ala | Arg | Ser |
| | | | 50 | | | | 55 | | | | 60 | | | | |
| Tyr | Asp | Leu | Ser | Asp | Ile | Thr | Gln | Ala | Asp | Leu | Ser | Arg | Asn | Arg | Phe |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Pro | Glu | Val | Pro | Glu | Ala | Ala | Cys | Gln | Leu | Val | Ser | Leu | Glu | Gly | Leu |
| | | | | | 85 | | | | 90 | | | | | 95 | |
| Ser | Leu | Tyr | His | Asn | Cys | Leu | Arg | Cys | Leu | Asn | Pro | Ala | Leu | Gly | Asn |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Thr | Ala | Leu | Thr | Tyr | Leu | Asn | Leu | Ser | Arg | Asn | Gln | Leu | Ser | Leu |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Leu | Pro | Pro | Tyr | Ile | Cys | Gln | Leu | Pro | Leu | Arg | Val | Leu | Ile | Val | Ser |
| | | | 130 | | | 135 | | | | | 140 | | | | |
| Asn | Asn | Lys | Leu | Gly | Ala | Leu | Pro | Pro | Asp | Ile | Gly | Thr | Leu | Gly | Ser |
| 145 | | | | | 150 | | | | 155 | | | | | 160 | |
| Leu | Arg | Gln | Leu | Asp | Val | Ser | Ser | Asn | Glu | Leu | Gln | Ser | Leu | Pro | Ser |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Glu | Leu | Cys | Gly | Leu | Ser | Ser | Leu | Arg | Asp | Leu | Asn | Val | Arg | Arg | Asn |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Gln | Leu | Ser | Thr | Leu | Pro | Glu | Glu | Leu | Gly | Asp | Leu | Pro | Leu | Val | Arg |
| | | | 195 | | | | 200 | | | | | 205 | | | |
| Leu | Asp | Phe | Ser | Cys | Asn | Arg | Val | Ser | Arg | Ile | Pro | Val | Ser | Phe | Cys |
| | | | 210 | | | 215 | | | | | 220 | | | | |
| Arg | Leu | Arg | His | Leu | Gln | Val | Ile | Leu | Leu | Asp | Ser | Asn | Pro | Leu | Gln |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | |
| Ser | Pro | Pro | Ala | Gln | Val | Cys | Leu | Lys | Gly | Lys | Leu | His | Ile | Phe | Lys |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Tyr | Leu | Ser | Thr | Glu | Ala | Gly | Gln | Arg | Gly | Ser | Ala | Leu | Gly | Asp | Leu |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 260 | | 265 | | 270 | | | | | | | | | | |
| Ala | Pro | Ser | Arg | Pro | Pro | Ser | Phe | Ser | Pro | Cys | Pro | Ala | Glu | Asp | Leu |
| | 275 | | | | | | 280 | | | | | 285 | | | |
| Phe | Pro | Gly | His | Arg | Tyr | Asp | Gly | Gly | Leu | Asp | Ser | Gly | Phe | His | Ser |
| | 290 | | | | | | 295 | | | | | 300 | | | |
| Val | Asp | Ser | Gly | Ser | Lys | Arg | Trp | Ser | Gly | Asn | Glu | Ser | Thr | Asp | Glu |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Phe | Ser | Glu | Leu | Ser | Phe | Arg | Ile | Ser | Glu | Leu | Ala | Arg | Glu | Pro | Arg |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Gly | Pro | Arg | Glu | Arg | Lys | Glu | Asp | Gly | Ser | Ala | Asp | Gly | Asp | Pro | Val |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Gln | Ile | Asp | Phe | Ile | Asp | Ser | His | Val | Pro | Gly | Glu | Asp | Glu | Glu | Arg |
| | 355 | | | | | | 360 | | | | | 365 | | | |
| Gly | Thr | Val | Glu | Glu | Gln | Arg | Pro | Pro | Glu | Leu | Ser | Pro | Gly | Ala | Gly |
| | 370 | | | | | 375 | | | | | | 380 | | | |
| Asp | Arg | Glu | Arg | Ala | Pro | Ser | Ser | Arg | Arg | Glu | Glu | Pro | Ala | Gly | Glu |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Glu | Arg | Arg | Arg | Pro | Asp | Thr | Leu | Gln | Leu | Trp | Gln | Glu | Arg | Glu | Arg |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Arg | Gln | Gln | Gln | Gln | Ser | Gly | Ala | Trp | Gly | Ala | Pro | Arg | Lys | Asp | Ser |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Leu | Leu | Lys | Pro | Gly | Leu | Arg | Ala | Val | Val | Gly | Gly | Ala | Ala | Ala | Val |
| | 435 | | | | | | 440 | | | | | 445 | | | |
| Ser | Thr | Gln | Ala | Met | His | Asn | Gly | Ser | Pro | Lys | Ser | Ser | Ala | Ser | Gln |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Ala | Gly | Gly | Cys | Ser | Gly | Ala | Gly | Ser | Pro | Ala | Pro | Ala | Pro | Ala | Ser |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Gln | Glu | Pro | Leu | Pro | Ile | Ala | Gly | Pro | Ala | Thr | Ala | Pro | Ala | Pro | Arg |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Pro | Leu | Gly | Ser | Ile | Gln | Arg | Pro | Asn | Ser | Phe | Leu | Phe | Arg | Ser | Ser |
| | 500 | | | | | | | 505 | | | | | 510 | | |
| Ser | Gln | Ser | Gly | Ser | Gly | Pro | Ser | Ser | Pro | Asp | Ser | Val | Leu | Arg | Pro |
| | 515 | | | | | | 520 | | | | | 525 | | | |
| Arg | Arg | Tyr | Pro | Gln | Val | Pro | Asp | Glu | Lys | Asp | Leu | Met | Thr | Gln | Leu |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Arg | Gln | Val | Leu | Glu | Ser | Arg | Leu | Gln | Arg | Pro | Leu | Pro | Glu | Asp | Leu |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Ala | Glu | Ala | Leu | Ala | Ser | Gly | Val | Ile | Leu | Cys | Gln | Leu | Ala | Asn | Gln |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Leu | Arg | Pro | Arg | Ser | Val | Pro | Phe | Ile | His | Val | Pro | Ser | Pro | Ala | Val |
| | 580 | | | | | | 585 | | | | | 590 | | | |
| Pro | Lys | Leu | Ser | Ala | Leu | Lys | Ala | Arg | Lys | Asn | Val | Glu | Ser | Phe | Leu |
| | 595 | | | | | | 600 | | | | | 605 | | | |
| Glu | Ala | Cys | Arg | Lys | Met | Gly | Val | Pro | Glu | Ala | Asp | Leu | Cys | Ser | Pro |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Ser | Asp | Leu | Leu | Gln | Gly | Thr | Ala | Arg | Gly | Leu | Arg | Thr | Ala | Leu | Glu |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| Ala | Val | Lys | Arg | Val | Gly | Gly | Lys | Ala | Leu | Pro | Pro | Leu | Trp | Pro | Pro |
| | | | | 645 | | | | | 650 | | | | | 655 | |
| Ser | Gly | Leu | Gly | Gly | Phe | Val | Val | Phe | Tyr | Val | Val | Leu | Met | Leu | Leu |
| | 660 | | | | | | | 665 | | | | 670 | | | |
| Leu | Tyr | Val | Thr | Tyr | Thr | Arg | Leu | Leu | Gly | Ser | | | | | |
| | 675 | | | | | | 680 | | | | | | | | |

<210> 5565
 <211> 472
 <212> DNA
 <213> Homo sapiens

<400> 5565
 nggatccaaa cgccgtggcc gcggggccgc gcccgggcag acccgggctc cgctctcacg
 60
 tcacgcggta catgggctac agttccttgt ccgagggctt ccgggagctg gagccgcaca
 120
 gaatgaagg gctcactggg agtggttccc aacttcgttg catattaaac cccccggaga
 180
 acttaaaactc cagtgccag tcctatgcaa tcagatcctg ggtctccact gtgcagcgcc
 240
 cgtggagagc cagcgatgtg gagggctcag atcaccagc tctttgggga cagggctctca
 300
 ctgcccccaa ggctggagtc cgggtggtgca atcacggctc acagcagtct cgacctccag
 360
 ggctcaagcg atcctccagc ctacagctcc cgagcagctg ggagcacagg cgcataccac
 420
 gcgtggcttt tttgagacga gggcttgcca tgtttcccag gctggctctg aa
 472

<210> 5566
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 5566
 Met Gln Ser Asp Pro Gly Ser Pro Leu Cys Ser Ala Arg Gly Glu Pro
 1 5 10 15
 Ala Met Trp Arg Val Glu Ile Thr Gln Phe Phe Gly Asp Arg Val Ser
 20 25 30
 Leu Pro Pro Arg Leu Glu Ser Gly Gly Ala Ile Thr Ala His Ser Ser
 35 40 45
 Leu Asp Leu Gln Gly Ser Ser Asp Pro Pro Ala Ser Ala Ser Arg Ala
 50 55 60
 Ala Gly Ser Thr Gly Ala Tyr His Ala Trp Leu Phe
 65 70 75

<210> 5567
 <211> 968
 <212> DNA
 <213> Homo sapiens

<400> 5567
 tttttttttt tttttttttt taggttccaa taaaatttta tttatgaaca ctaaaatttg
 60
 aatttcatat gcttttctca tgccacaaaa tattattctt ttgattgtat tcaacctttt
 120
 taaaaacat ttttagctca caagctgtac aaaaacagac ggtgagtaaa ttggcccaca
 180
 gaccggtttg ctageccctg ggcttaagag atctgtccac ttactcctca acatgcagag
 240

tgtgaactgt gtgaactgca taggccacag caatcttact gcatccattc ccgctgcatc
 300
 attatttttg atttgtattc attcagttca ccgaagcatt cacttggcac ctctccaaat
 360
 ctgggtactg tgcaagatcc ttccttggga cactgaagga aaatcagaca cggcccttct
 420
 ctcaagtctg cagactctcc ggtatccaga tactacggct ctcatagtat cagaaaacac
 480
 agccacaagc gcaggtaagt atcagagggtg ttttacgaga tacatgtatc agattcttaa
 540
 ggctgctgta ccaaaatacc acaaactgca tggcttaaaa caacagaaat ttattccctc
 600
 acaatcctgg aggccagatg tctgaaatca agatattggg agggttgggt ccttctcgag
 660
 actctgaggg agaatctgtg acatgcctgt tttcctagct tctagtact tctccaatt
 720
 cttagggttc tttggctcat agatgcattg ctctaattct tgctccatc tttccatggc
 780
 cttcagctct gtgtgtctat ttcccttct tttctaagag ctagtcattg aatttagggc
 840
 ccaccctact acaggttgat ctcatctcca ggtccttgat ttcattctgca aaaacttttt
 900
 ccaaataatg tcacacgtgg agattcccag tgaatgtatc tctgggggc cactattcag
 960
 cctattac
 968

<210> 5568

<211> 130

<212> PRT

<213> Homo sapiens

<400> 5568

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gln | Ser | Val | Asn | Cys | Val | Asn | Cys | Ile | Gly | His | Ser | Asn | Leu | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Ser | Ile | Pro | Ala | Ala | Ser | Leu | Phe | Leu | Ile | Cys | Ile | His | Ser | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Arg | Ser | Ile | His | Leu | Ala | Pro | Leu | Gln | Ile | Trp | Val | Leu | Cys | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ile | Leu | Pro | Trp | Asp | Thr | Glu | Gly | Lys | Ser | Asp | Thr | Ala | Leu | Leu | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ser | Ser | Gln | Thr | Leu | Arg | Tyr | Pro | Asp | Thr | Thr | Ala | Leu | Ile | Val | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Glu | Asn | Thr | Ala | Thr | Ser | Ala | Gly | Lys | Tyr | Gln | Arg | Cys | Phe | Thr | Arg |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Tyr | Met | Tyr | Gln | Ile | Leu | Lys | Ala | Ala | Val | Pro | Lys | Tyr | His | Lys | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| His | Gly | Leu | Lys | Gln | Gln | Lys | Phe | Ile | Pro | Ser | Gln | Ser | Trp | Arg | Pro |
| | | 115 | | | | | 120 | | | | | | 125 | | |
| Asp | Val | | | | | | | | | | | | | | |
| | 130 | | | | | | | | | | | | | | |

<210> 5569

<211> 876

<212> DNA

<213> Homo sapiens

<400> 5569

```

nntttttttt tttttttttt ttgttaacct agagaaaaaa attttattta aagacacatt
60
ttaagtaaaa tgaagaacat ttactttatt tttatgtcca gtacagtcaa agcagccaca
120
ttgcataacc ccggggggacc cccttcctct ttgtgatgcc ccagaacaat attgatttga
180
ttatagaaaag ccaccggcag cctacatgcg caacgggtgag ttgttggtta tatacactgt
240
ggaccataca gtggaatatt acagtcaata aaaggatatt ttagagagaa aaaaaaacat
300
tggaacacgc ttatgatata atgttaggca aaatcgctgt tatgaacagc tcgtttgggg
360
cagagcaaat cctgggaagt aacgctgagg ctgttggtgc aggcggtgga gtacaacatc
420
ttcgagggta tggagtgcc cggtcccca ctagtggtca tcagccaggg caagatcgtc
480
tttgaagacg gaaacatcaa cgtcaacaag ggcattgggc gcttcattcc gcggaaggcg
540
ttcccggagc acagtccac gtggctggaa cttcacaatc atggcagaag gcacgtctgc
600
gaggcatcct ggggctgcac tgetgatcct cttctctctc ccctggccct gagtgtctgc
660
ttcatgtggc tcagcccttc cgtccttcaa gccttcatca gcttcagggc agccccgagt
720
ctgtgcccag gtacactggc taaaatgcag tgtcttccaa atagccatat ctcttttaat
780
caggagagcaa ttccagcatg gaagtcccca tcatgtctct gctggcaggt acagggtgcc
840
gtttgtgacg gatgaaagca ccgacagccc acgcgt
876

```

<210> 5570

<211> 169

<212> PRT

<213> Homo sapiens

<400> 5570

```

Thr Ala Arg Leu Gly Gln Ser Lys Ser Trp Glu Val Thr Leu Arg Leu
1      5      10      15
Leu Val Gln Ala Val Glu Tyr Asn Ile Phe Glu Gly Met Glu Cys His
20     25     30
Gly Ser Pro Leu Val Val Ile Ser Gln Gly Lys Ile Val Phe Glu Asp
35     40     45
Gly Asn Ile Asn Val Asn Lys Gly Met Gly Arg Phe Ile Pro Arg Lys
50     55     60
Ala Phe Pro Glu His Ser Ser Thr Trp Leu Glu Leu His Asn His Gly
65     70     75     80
Arg Arg His Val Cys Glu Ala Ser Trp Gly Cys Thr Ala Asp Pro Leu
85     90     95
Leu Ser Pro Leu Ala Leu Ser Ala Ala Phe Met Trp Leu Ser Pro Ser

```

```

          100                      105                      110
Val Leu Gln Ala Phe Ile Ser Phe Arg Ala Ala Pro Ser Leu Cys Pro
          115                      120                      125
Gly Thr Leu Ala Lys Met Gln Cys Leu Pro Asn Ser His Ile Ser Phe
          130                      135                      140
Asn Gln Gly Ala Ile Pro Ala Trp Lys Ser Pro Ser Cys Ser Cys Trp
145                      150                      155                      160
Gln Val Gln Val Pro Val Cys Asp Gly
          165

```

<210> 5571

<211> 405

<212> DNA

<213> Homo sapiens

<400> 5571

```

aaccagaaag tggatctctt cagcctggga attatcttct ttgagatgtc ctatcacccc
60
atggtcacgg cttcagaaaag gatctttgtt ctcaaccaac tcagagatcc cacttcgcct
120
aagtttccag aagactttga cgatggagag catgcaaagc agaaatcagt catctcctgg
180
ctgttgaacc acgatccagc aaaacggccc acagccacag aactgctcaa gagtgaagctg
240
ctgccccac cccagatgga ggagtcagag ctgcatgaag tgctgcacca cacgctgacc
300
aacgtggatg ggaaggccta ccgcaccatg atggcccaga tcttctcgca gcgcctcgct
360
ggggcggggg gaggtggcta ccgctcccgg cttggcgctc cgcg
405

```

<210> 5572

<211> 135

<212> PRT

<213> Homo sapiens

<400> 5572

```

Asn Gln Lys Val Asp Leu Phe Ser Leu Gly Ile Ile Phe Phe Glu Met
 1      5      10      15
Ser Tyr His Pro Met Val Thr Ala Ser Glu Arg Ile Phe Val Leu Asn
      20      25      30
Gln Leu Arg Asp Pro Thr Ser Pro Lys Phe Pro Glu Asp Phe Asp Asp
      35      40      45
Gly Glu His Ala Lys Gln Lys Ser Val Ile Ser Trp Leu Leu Asn His
      50      55      60
Asp Pro Ala Lys Arg Pro Thr Ala Thr Glu Leu Leu Lys Ser Glu Leu
65      70      75      80
Leu Pro Pro Pro Gln Met Glu Glu Ser Glu Leu His Glu Val Leu His
      85      90      95
His Thr Leu Thr Asn Val Asp Gly Lys Ala Tyr Arg Thr Met Met Ala
      100     105     110
Gln Ile Phe Ser Gln Arg Leu Ala Gly Ala Gly Gly Gly Tyr Arg
      115     120     125
Ser Arg Leu Gly Val Pro Arg

```

130

135

<210> 5573

<211> 1279

<212> DNA

<213> Homo sapiens

<400> 5573

naaaaaacagg tggaatccgg gctggagccg gagctccggc ggcgcggggtg gcggcacgtc
60
cctccagaca gtaccacagg cacctggagt accggcatcg gtcgctgtgg cccccgagtg
120
tccgtcagag cctaggggag cctgccctcc cgcgcctcgt cggggccccg ccaggcacct
180
tggccgcccg cgcacggacg cgggcacgag cactagatca cggctgctgg acctcggcac
240
gttgacaaga tttctctggg gtaccgcgga ggattacttt gaatttcggt ggtcgcctgt
300
ggtctggcat atttagaact taagtctatt atttcgggca ccatgacttt gaggcctttta
360
gaagactggg gcagggggat ggacatgaac cctcggaaaag cgctattgat tgccggcatc
420
tcccagagct gcagtgtggc agaaatcgag gaggctctgc aggctggttt agctcccttg
480
ggggagtaca gactgcttgg aaggatgttc aggagggatg agaacaggaa agtagcctta
540
gtagggctta ctgcggagac tagtcacgcc ctgggtcccta aggagatacc gggaaaaggg
600
ggtatctgga gagtgatctt taagccccct gaccagata atacattttt aagcagatta
660
aatgaatttt tagcgggaga gggcatgaca gtgggtgagt tgagcagagc tcttggacat
720
gaaaatggct ccttagaccc agagcagggc atgatccccg aaatgtgggc ccctatgttg
780
gcacaggcat tagaggctct tcagcctgcc ctgcaatgct tgaagtataa aaagctgaga
840
gtgttctcgg gcagggagtc tccagaacca ggagaagaag aatttggacg ctggatgttt
900
catactactc agatgataaa ggcgtggcag gtgccagatg tagagaagag aaggcgattg
960
ctagagagcc ttcgaggccc agcacttgat gttattcgtg tcctcaagat aaacaatcct
1020
ttaattactg tcgatgaatg tctgcaggct cttgaggagg tatttggggg tacagataat
1080
cctagggagt tgcagggtcaa atatctaacc acttaccaga aggatgagga aaagtgtcgt
1140
gcttatgtac taaggctgga gcctttgtta cagaagctgg tacagagagg agcaattgag
1200
agagatgctg tgaatcaggc ccgcctagac caagtcattg ctggggcagt ccacaaaaca
1260
attcgcagag agcttaata
1279

<210> 5574

<211> 312
 <212> PRT
 <213> Homo sapiens

<400> 5574

```

Met Thr Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn
 1           5           10           15
Pro Arg Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val
      20           25           30
Ala Glu Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu
      35           40           45
Tyr Arg Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val
      50           55           60
Ala Leu Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys
65           70           75           80
Glu Ile Pro Gly Lys Gly Gly Ile Trp Arg Val Ile Phe Lys Pro Pro
      85           90           95
Asp Pro Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly
      100          105          110
Glu Gly Met Thr Val Gly Glu Leu Ser Arg Ala Leu Gly His Glu Asn
      115          120          125
Gly Ser Leu Asp Pro Glu Gln Gly Met Ile Pro Glu Met Trp Ala Pro
      130          135          140
Met Leu Ala Gln Ala Leu Glu Ala Leu Gln Pro Ala Leu Gln Cys Leu
145          150          155          160
Lys Tyr Lys Lys Leu Arg Val Phe Ser Gly Arg Glu Ser Pro Glu Pro
      165          170          175
Gly Glu Glu Glu Phe Gly Arg Trp Met Phe His Thr Thr Gln Met Ile
      180          185          190
Lys Ala Trp Gln Val Pro Asp Val Glu Lys Arg Arg Arg Leu Leu Glu
      195          200          205
Ser Leu Arg Gly Pro Ala Leu Asp Val Ile Arg Val Leu Lys Ile Asn
      210          215          220
Asn Pro Leu Ile Thr Val Asp Glu Cys Leu Gln Ala Leu Glu Glu Val
225          230          235          240
Phe Gly Val Thr Asp Asn Pro Arg Glu Leu Gln Val Lys Tyr Leu Thr
      245          250          255
Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu
      260          265          270
Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp
      275          280          285
Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His
      290          295          300
Lys Thr Ile Arg Arg Glu Leu Asn
305          310

```

<210> 5575
 <211> 2405
 <212> DNA
 <213> Homo sapiens

<400> 5575

```

ctctaattccc ctttcttgac tcttccaagt caggattctc accaaggaag ctatctgcct
60

```

tcttttgggaa tgttgggctt atgaagactt gagataatgg ggttcatgta ttcagactct
120
ttagcatata cagtagagtt tctaattgttgc tcagcattcc ctagtgggcg gttacaagtt
180
aggttgggat tctaatacata ttttatgata tctcacagat taaattgcac tttgtctctg
240
cccagtcttg attccctttt ggccagcagt ttttaggtct gtcagtactg cactgcaaga
300
atggcagatt ttgggatctc tgctggccag tttgtggcag tggctctggga taagtcatcc
360
ccagtggagg ctctgaaagg tctggtggat aagcttcaag cgtaaacagg caatgagggc
420
cgctgtctg tggaaaacat caagcagctg ttgcaatgtt tagtcccagg aagcaccact
480
ctgcacagtg ctgagatttt ggctgaaatc gcccgatcc ttcggcctgg tggatgtctt
540
tttctgaagg agccagtaga gacagctgta gataacaata gcaaagtga gacagcatct
600
aagctgtgtt cagccctgac tctttctggt cttgtggaag tgaaagagct gcagcgggag
660
cccctaacc ctgaggaagt acagtctgtt cgagaacacc ttggtcatga aagtgacaac
720
ctgctgtttg ttcagatcac agggcaaaaa ccaaactttg aagtgggttc ttctaggcag
780
cttaagcttt ccatcaccaa gaagtcttct ccttcagtga aacctgctgt ggaccctgct
840
gctgccaagc tgtggaccct ctccagccaac gatattggagg acgacagcat gtgcatcttc
900
tgtggatgta gtttaactca ccgttggcct cttgagcatg tggtcagggt gaacatgatg
960
atcaacaaaa aggaggacag ggtggacacc ttctttaccc tggactccaa gtttcctctc
1020
gaagcctgca gtcacttttag cttttcatta gcagagacca cgactgtatc actcattgct
1080
ttgaacactc tccaggatct cattgactca gatgagctgc tggatccaga agatttgaag
1140
aagccagatc cagcttccct gcgggctgct tcttgtgggg aagggaaaaa gaggaaggcc
1200
tgtaagaact gcacctgtgg ccttgctgaa gaactggaaa aagagaagtc aaggaacag
1260
atgagctccc aaccaagtc agcttgtgga aactgctacc tgggcgatgc cttccgctgt
1320
gccagctgcc cctaccttg gatgccagcc ttcaaacctg gggaaaagg gcttctgagt
1380
gatagcaatc ttcattgatgc ctaggaggtt cctgacatgg gacctatctg ctccctccagc
1440
caactcctgt cctcacatc ccaccatggt ggctcctccc acctcctctg gatttgttca
1500
ctctgagatc tgtttgcaga gtgggtgctt agcagacaga gtgaagctgg ctggggggca
1560
cagtgggtgt tagtgctgct gtgtatcaaa agaccaagg attatgggac ctggtttcag
1620
aatgggatgg gtttcttcac ctcatgttaa gagaaggag tgtgtcctga agaagccctt
1680

cttctgatgt taaaatgctg accagaacgc tcttgagccc aggcacggtt gagcattaac
 1740
 actctgtgac agagctgcag acccctgcct tgagtctcat ctcagcaatg ctgccaccct
 1800
 cttgtctttc agagttgtta gtttactcca ttctttgtga cacgagtcaa gtggctcaca
 1860
 acctcctcag ggcaccagag gactcactca ctgggttgctg tgatgatatc cagtgtccct
 1920
 ctgccccctt ccatcccca ccacatttga ctgtagcatt gcatctgtgt cctgttgtca
 1980
 tttatgttaa ccttcaggta ttaaacttgc tgcatactct gacatatctt gagattctgc
 2040
 atgtcttgta aagagagggg atgtgcattt gtgtgtgatg ttggatagtc atccacgctc
 2100
 agtttgacc attggaggaa cttagtgtca cgcacaaatg gggctattcc tacgcttaga
 2160
 atagggcttg tctgccact ttagaagagt ccagggttgg gagcatttag agggaagcag
 2220
 ggcagaactc tgaacgacaa tacgtctctc tgagcagaga cccctttgtt cttgttatcc
 2280
 acccatatgg acttgaatc aatcttgcca aatatttgga gagattgtgt ggatttaaga
 2340
 gacctggatt tttatatattt accagtaa ataaagtctt attgatattc gtccttgaaa
 2400
 cttga
 2405

<210> 5576

<211> 367

<212> PRT

<213> Homo sapiens

<400> 5576

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Asp | Phe | Gly | Ile | Ser | Ala | Gly | Gln | Phe | Val | Ala | Val | Val | Trp |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asp | Lys | Ser | Ser | Pro | Val | Glu | Ala | Leu | Lys | Gly | Leu | Val | Asp | Lys | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Ala | Leu | Thr | Gly | Asn | Glu | Gly | Arg | Val | Ser | Val | Glu | Asn | Ile | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gln | Leu | Leu | Gln | Cys | Leu | Val | Pro | Gly | Ser | Thr | Thr | Leu | His | Ser | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Ile | Leu | Ala | Glu | Ile | Ala | Arg | Ile | Leu | Arg | Pro | Gly | Gly | Cys | Leu |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Phe | Leu | Lys | Glu | Pro | Val | Glu | Thr | Ala | Val | Asp | Asn | Asn | Ser | Lys | Val |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Lys | Thr | Ala | Ser | Lys | Leu | Cys | Ser | Ala | Leu | Thr | Leu | Ser | Gly | Leu | Val |
| | | 100 | | | | | | 105 | | | | 110 | | | |
| Glu | Val | Lys | Glu | Leu | Gln | Arg | Glu | Pro | Leu | Thr | Pro | Glu | Glu | Val | Gln |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ser | Val | Arg | Glu | His | Leu | Gly | His | Glu | Ser | Asp | Asn | Leu | Leu | Phe | Val |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Gln | Ile | Thr | Gly | Lys | Lys | Pro | Asn | Phe | Glu | Val | Gly | Ser | Ser | Arg | Gln |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Leu | Lys | Leu | Ser | Ile | Thr | Lys | Lys | Ser | Ser | Pro | Ser | Val | Lys | Pro | Ala |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | | | 165 | | | | | | 170 | | | | | | 175 | |
| Val | Asp | Pro | Ala | Ala | Ala | Lys | Leu | Trp | Thr | Leu | Ser | Ala | Asn | Asp | Met | | |
| | | | 180 | | | | | | 185 | | | | | | 190 | | |
| Glu | Asp | Asp | Ser | Met | Cys | Ile | Phe | Cys | Gly | Cys | Ser | Leu | Thr | His | Arg | | |
| | | 195 | | | | | 200 | | | | | | 205 | | | | |
| Trp | Pro | Leu | Glu | His | Val | Val | Arg | Leu | Asn | Met | Met | Ile | Asn | Gln | Lys | | |
| | 210 | | | | | 215 | | | | | | 220 | | | | | |
| Glu | Asp | Arg | Val | Asp | Thr | Phe | Phe | Thr | Leu | Asp | Ser | Lys | Phe | Pro | Leu | | |
| 225 | | | | | 230 | | | | | | 235 | | | | | 240 | |
| Glu | Ala | Cys | Ser | His | Phe | Ser | Phe | Ser | Leu | Ala | Glu | Thr | Thr | Thr | Thr | Val | |
| | | | 245 | | | | | | 250 | | | | | | 255 | | |
| Ser | Leu | Ile | Ala | Leu | Asn | Thr | Leu | Gln | Asp | Leu | Ile | Asp | Ser | Asp | Glu | | |
| | | 260 | | | | | | 265 | | | | | | 270 | | | |
| Leu | Leu | Asp | Pro | Glu | Asp | Leu | Lys | Lys | Pro | Asp | Pro | Ala | Ser | Leu | Arg | | |
| | | 275 | | | | | 280 | | | | | | 285 | | | | |
| Ala | Ala | Ser | Cys | Gly | Glu | Gly | Lys | Lys | Arg | Lys | Ala | Cys | Lys | Asn | Cys | | |
| | 290 | | | | | 295 | | | | | | 300 | | | | | |
| Thr | Cys | Gly | Leu | Ala | Glu | Glu | Leu | Glu | Lys | Glu | Lys | Ser | Arg | Glu | Gln | | |
| 305 | | | | | 310 | | | | | | 315 | | | | | 320 | |
| Met | Ser | Ser | Gln | Pro | Lys | Ser | Ala | Cys | Gly | Asn | Cys | Tyr | Leu | Gly | Asp | | |
| | | | 325 | | | | | | 330 | | | | | | 335 | | |
| Ala | Phe | Arg | Cys | Ala | Ser | Cys | Pro | Tyr | Leu | Gly | Met | Pro | Ala | Phe | Lys | | |
| | | 340 | | | | | | 345 | | | | | | 350 | | | |
| Pro | Gly | Glu | Lys | Val | Leu | Leu | Ser | Asp | Ser | Asn | Leu | His | Asp | Ala | | | |
| | 355 | | | | | | 360 | | | | | | 365 | | | | |

```
<210> 5577
<211> 659
<212> DNA
<213> Homo sapiens
```

```

<400> 5577
ctccacgcag ataagctgtg gttctgctgc ctgtccccc accacaagct gctgcagtac
60
ggagacatgg aggagggcng ccagcccgc taccctnngg agagtctgcc cgagcaactc
120
cctgtggccg acatgagggc actcctgaca ggcaaggact gcccccatgt cggggagaag
180
ggctccggga agcagaacaa ggacctctat gagttggcct tctcaatcag ctatgaccgt
240
ggggaggagg aagcgtacct caacttcatt gccccctcca agcgggagtt ctacctgtgg
300
acagatgggc tcagtgcctt gctgggcagt cccatgggca gcgagcagac acggctggac
360
ctggagcagc tgctgacctt ggagaccaag ctgcgtctgc tggagctgga gaacgtgccc
420
atccccgagc ggccaccccc tgtgccccca cccccacca acttcaactt ctgctatgac
480
tgcagcatcg ctgaaccttg acagtgtggc tggccatggg ccacagctgc ggccactgca
540
gcagccatga agggcagtggt gtagaggagt gcaggcaccc tgaccagcag agattgctgc
600
agaaataaag tctgcttggt tcttgggaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
659

```

<210> 5578
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 5578
 Leu His Ala Asp Lys Leu Trp Phe Cys Cys Leu Ser Pro Asn His Lys
 1 5 10 15
 Leu Leu Gln Tyr Gly Asp Met Glu Glu Gly Xaa Gln Pro Ala Tyr Pro
 20 25 30
 Xaa Glu Ser Leu Pro Glu Gln Leu Pro Val Ala Asp Met Arg Ala Leu
 35 40 45
 Leu Thr Gly Lys Asp Cys Pro His Val Arg Glu Lys Gly Ser Gly Lys
 50 55 60
 Gln Asn Lys Asp Leu Tyr Glu Leu Ala Phe Ser Ile Ser Tyr Asp Arg
 65 70 75 80
 Gly Glu Glu Glu Ala Tyr Leu Asn Phe Ile Ala Pro Ser Lys Arg Glu
 85 90 95
 Phe Tyr Leu Trp Thr Asp Gly Leu Ser Ala Leu Leu Gly Ser Pro Met
 100 105 110
 Gly Ser Glu Gln Thr Arg Leu Asp Leu Glu Gln Leu Leu Thr Met Glu
 115 120 125
 Thr Lys Leu Arg Leu Leu Glu Leu Glu Asn Val Pro Ile Pro Glu Arg
 130 135 140
 Pro Pro Pro Val Pro Pro Pro Pro Thr Asn Phe Asn Phe Cys Tyr Asp
 145 150 155 160
 Cys Ser Ile Ala Glu Pro
 165

<210> 5579
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 5579
 actcctgtat caaccatgag ttctttctcag cctgtgtcac gaccattgca acccatacaa
 60
 ccagcaccgc ctcttcaacc atctgggggtg ccaacaagtg gaccatctca gaccaccata
 120
 cacttactac ctacagctcc aactaccgtg aatgtaacac atcgtccagt aactcaggtg
 180
 accacaagac tcctgttacc aagagctcct gcaaaccacc aggtgggttta tacaactctt
 240
 cctgcaccac cagctcaggc tcctttgcga ggaactgtta tgcaggctcc tgctgttcgg
 300
 caggtcaatc cccaaaatag tgttacagtt cgagtgcctc aaacaaccac atatgttgta
 360
 aacaatggac taaccctggg atcaacagga cctcagctca cagtgcacat cggaccacca
 420
 caagtgcata ctgagccccc acgccccgtg caccagcac ccttaccaga agctccacaa
 480
 ccacagcgtc tgcccccaga agctgccagc acatctctgc ctcagaagcc acacttgaag
 540

ttagcacgcg ttcagagtca aaatggcata gtactgtcat ggagtgtcct ggaggtggat
 600
 cgaagctgtg ccactgttga tagctacat ctctatgctt accatgagga acccagtgcc
 660
 actgtgccct cacaatggaa aaagattggg gaagtcaagg cacttccctt gcccattggca
 720
 tgtactctca cccagtttgt atctggttagc aaatactact ttgcagtacg agccaaggat
 780
 atttatggac gttttgggcc tttctgtgat cctcagtcaa cagatgtgat ctcttctacc
 840
 cagagcagtt aaaccttgga gcctttatat tttcctcttt taaaatttcc accttttggg
 900
 cttgttttta atcttgtgca tgatacccca tgtaaaatcc accttgtgca agatttcttg
 960
 gacagatgtg tgtatacact acatttgttt ataaccagaa gcaaaaataaa ctcagcccac
 1020
 aaagctagaa tcttttcctg gacagtttag gctttggggg ttggaaatgt aaatgtgtac
 1080
 cttgcttttag ttttgaggct ggggaatatg tgtgggtgtt tatgtgtgtt tttccttatg
 1140
 taggtgttat tgcattggag tctcccat ttcattctcaa atttacctct taaagtacga
 1200
 agtaagtaga tcaaaggatt tgagatgtgt aactggcatg attctgcttt tgaaggatct
 1260
 atagtatcat tttagttaag tgggtcaaac agaatacaaaa caaaacccaa ag
 1312

<210> 5580

<211> 283

<212> PRT

<213> Homo sapiens

<400> 5580

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Pro | Val | Ser | Thr | Met | Ser | Ser | Ser | Gln | Pro | Val | Ser | Arg | Pro | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Pro | Ile | Gln | Pro | Ala | Pro | Pro | Leu | Gln | Pro | Ser | Gly | Val | Pro | Thr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Pro | Ser | Gln | Thr | Thr | Ile | His | Leu | Leu | Pro | Thr | Ala | Pro | Thr |
| | | | 35 | | | | 40 | | | | | | 45 | | |
| Thr | Val | Asn | Val | Thr | His | Arg | Pro | Val | Thr | Gln | Val | Thr | Thr | Arg | Leu |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Pro | Val | Pro | Arg | Ala | Pro | Ala | Asn | His | Gln | Val | Val | Tyr | Thr | Thr | Leu |
| 65 | | | | | 70 | | | | 75 | | | | | | 80 |
| Pro | Ala | Pro | Pro | Ala | Gln | Ala | Pro | Leu | Arg | Gly | Thr | Val | Met | Gln | Ala |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Pro | Ala | Val | Arg | Gln | Val | Asn | Pro | Gln | Asn | Ser | Val | Thr | Val | Arg | Val |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Pro | Gln | Thr | Thr | Thr | Tyr | Val | Val | Asn | Asn | Gly | Leu | Thr | Leu | Gly | Ser |
| | | | 115 | | | | | 120 | | | | | 125 | | |
| Thr | Gly | Pro | Gln | Leu | Thr | Val | His | His | Arg | Pro | Pro | Gln | Val | His | Thr |
| | | | 130 | | | | 135 | | | | | 140 | | | |
| Glu | Pro | Pro | Arg | Pro | Val | His | Pro | Ala | Pro | Leu | Pro | Glu | Ala | Pro | Gln |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Pro | Gln | Arg | Leu | Pro | Pro | Glu | Ala | Ala | Ser | Thr | Ser | Leu | Pro | Gln | Lys |

<400> 5582
Met Ala Ala Pro Arg Gln Ile Pro Ser His Ile Val Arg Leu Lys Pro

```

      1             5             10             15
Ser Cys Ser Thr Asp Ser Ser Phe Thr Arg Thr Pro Val Pro Thr Val
      20             25             30
Ser Leu Ala Ser Arg Glu Leu Pro Val Ser Ser Trp Gln Val Thr Glu
      35             40             45
Pro Ser Ser Lys Asn Leu Trp Glu Gln Ile Cys Lys Glu Tyr Glu Ala
      50             55             60
Glu Gln Pro Pro Phe Pro Glu Gly Tyr Lys Val Lys Gln Glu Pro Val
65             70             75             80
Ile Thr Val Ala Pro Val Glu Glu Met Leu Phe His Gly Phe Ser Ala
      85             90             95
Glu His Tyr Phe Pro Val Ser His Phe Thr Met Ile Ser Arg Thr Pro
      100            105            110
Cys Pro Gln Asp Lys Ser Glu Thr Ile Asn Pro Lys Thr Cys Ser Pro
      115            120            125
Lys Glu Tyr Leu Glu Thr Phe Ile Phe Pro Val Leu Leu Pro Gly Met
      130            135            140
Ala Ser Leu Leu His Gln Ala Lys Lys Glu Lys Cys Phe Glu Val Ser
145            150            155            160
Cys Leu Ala Gly Phe Leu Tyr Phe Glu Ile Leu Asn His Ser Leu Leu
      165            170            175
Ser Asp Asp Ser Ser Leu Ser Trp Tyr His Gln Val Val Leu Gln Met
      180            185            190
Thr Pro Ser Gly Gly Lys Ala Cys Val Trp Gly His Leu Pro Ser Ser
      195            200            205
Ser His Thr Ile
      210

```

<210> 5583

<211> 2101

<212> DNA

<213> Homo sapiens

<400> 5583

```

nnaggccgcg actgctgtgct gctgcaagag gacttttctgg cgcacagggg cgcacccac
60
gtctacctgc agcgcatcca gctcaacaac cccacggagc gcgtggccgc gctgcagact
120
gtggggccca ctgccggccc agcccccaat gccttcacca gtaccctgga gaaggctcga
180
gaccatcagt tcctcctcta ctcaggccgg tccccgccta cgcccactgg gttggtgcac
240
ctggtggtgg tggccgcca gaagctggtg aaccgcctcc aagtggctcc caagacgcag
300
ctggatgaga cgggtgctgtg ggtggtgcac gtctctggcc ccattaaccc ccagggtgctc
360
aaaagcaaag cagccaagga gctcaaggcg ctgcaggact tggcacggaa ggaaatgctg
420
gagctcttgg acatgccagc ggcggagctg cttcaagacc accagctcct ctgggctcag
480
ctcttcagcc caggagtgga aatgaagaag atcactgaca cccacacgcc gtctggcctc
540
accgtgaacc tgacgtctta ttacatgctc tcctgctcgc cagccccact gctcagcccc
600

```

tccctgagcc acagggagcg agaccagatg gagtcgacgc tcaactatga agatcactgc
660
ttcagcgggc acgccaccat gcacgccgag aacctgtggc cggggcggct gtcctccgtc
720
cagcagatcc tgcagctctc tgacctgtgg aggctgaccc tccagaagcg tggctgcaag
780
gggctgggtga aggtgggtgc cccaggcatc ctgcagggga tggctgctcag ctttgggggg
840
ctgcagttca cagagaacca cctccagttc caggccgacc ccgacgtgct gcacaacagc
900
tatgcattgc atggcatccg ctacaagaac gaccatatca acctggccgt gctgcggatg
960
ccgagggcaa gccctaccta cacgtgtccg tggagtcccg tggccagcct gtcanagatc
1020
tatgcctgca aggcaggctg cctggacgag ccagtggagc tgacctcggc gccacgggc
1080
cacaccttct cggctcatggg gacacagccc atcacgccac tgctctacat ctccaccgac
1140
ctcacacacc tgcaggacct gcggcacacg ctgcacctca aggccatcct ggcccatgat
1200
gagcacatgg cccagcagga ccccgggctg cccttctctt tctggttcag cgtggcctcc
1260
ctaatacccc tcttccacct ctctctcttc aagctcatct acaacgagta ctgtgggcct
1320
ggagccaagc ccctcttcag gagtaaggaa gatcccagtg tctgagtga ctaacagtcc
1380
tgctttcagc caccatttgc acaagacacc cagcactgaa agtcccgtg ccaggagcaa
1440
gggatccttt ggaagcacc gccctttgtg ccttggttggg ggaaaccggt gacgcagaag
1500
tgagtgtgga tacaccagag tttgcattgg aaggaatgag tgtcacgtgg ggaggggaagg
1560
ggccagtgga ccttttgtaa gctttccact caataaaatg aacctgtatg gcaaatactt
1620
gaaatggaac tcaactcctc cactttcccc ctttcttctg tcccaggaaa tagatcatct
1680
tttgaaaaga ctcttgtcta ggaaaagttg tgtccttttc ctaatttaac gtgttctttc
1740
ttaatgaagt ttaatttat ttttggtgag attttgctag atggcttttg catcccctgt
1800
agatgggtgag tggtggcggg gatgtccgtc tcggcgttcg gagggccac ggtcccagg
1860
ctgggccggg gccccccagg gtggctgtgc tgctgcctgt aggagggtgc gggttgtgct
1920
gtcatcctcg ggtttgacg ccctttttta ggagcctgtg gacatctgtg gttttgtact
1980
ttggggcttc aggggaggtg ttttaacttc tagtgattga tgattgtcag gttttgaaat
2040
accaaagctt ttttgttctg tttttaaata aatatctttc aaactttaaa aaaaaaaaaa
2100
a
2101

<210> 5584

<211> 454

<212> PRT

<213> Homo sapiens

<400> 5584

```

Xaa Gly Arg Asp Cys Val Leu Leu Gln Glu Asp Phe Leu Ala His Arg
 1           5           10           15
Gly Arg Pro His Val Tyr Leu Gln Arg Ile Gln Leu Asn Asn Pro Thr
      20           25           30
Glu Arg Val Ala Ala Leu Gln Thr Val Gly Pro Thr Ala Gly Pro Ala
      35           40           45
Pro Asn Ala Phe Thr Ser Thr Leu Glu Lys Val Gly Asp His Gln Phe
      50           55           60
Leu Leu Tyr Ser Gly Arg Ser Pro Pro Thr Pro Thr Gly Leu Val His
      65           70           75           80
Leu Val Val Val Ala Lys Lys Leu Val Asn Arg Leu Gln Val Ala
      85           90           95
Pro Lys Thr Gln Leu Asp Glu Thr Val Leu Trp Val Val His Val Ser
      100          105          110
Gly Pro Ile Asn Pro Gln Val Leu Lys Ser Lys Ala Ala Lys Glu Leu
      115          120          125
Lys Ala Leu Gln Asp Leu Ala Arg Lys Glu Met Leu Glu Leu Leu Asp
      130          135          140
Met Pro Ala Ala Glu Leu Leu Gln Asp His Gln Leu Leu Trp Ala Gln
      145          150          155          160
Leu Phe Ser Pro Gly Val Glu Met Lys Lys Ile Thr Asp Thr His Thr
      165          170          175
Pro Ser Gly Leu Thr Val Asn Leu Thr Leu Tyr Tyr Met Leu Ser Cys
      180          185          190
Ser Pro Ala Pro Leu Leu Ser Pro Ser Leu Ser His Arg Glu Arg Asp
      195          200          205
Gln Met Glu Ser Thr Leu Asn Tyr Glu Asp His Cys Phe Ser Gly His
      210          215          220
Ala Thr Met His Ala Glu Asn Leu Trp Pro Gly Arg Leu Ser Ser Val
      225          230          235          240
Gln Gln Ile Leu Gln Leu Ser Asp Leu Trp Arg Leu Thr Leu Gln Lys
      245          250          255
Arg Gly Cys Lys Gly Leu Val Lys Val Gly Ala Pro Gly Ile Leu Gln
      260          265          270
Gly Met Val Leu Ser Phe Gly Gly Leu Gln Phe Thr Glu Asn His Leu
      275          280          285
Gln Phe Gln Ala Asp Pro Asp Val Leu His Asn Ser Tyr Ala Leu His
      290          295          300
Gly Ile Arg Tyr Lys Asn Asp His Ile Asn Leu Ala Val Leu Arg Met
      305          310          315          320
Pro Arg Ala Ser Pro Thr Tyr Thr Cys Pro Trp Ser Pro Val Ala Ser
      325          330          335
Leu Ser Xaa Ile Tyr Ala Cys Lys Ala Gly Cys Leu Asp Glu Pro Val
      340          345          350
Glu Leu Thr Ser Ala Pro Thr Gly His Thr Phe Ser Val Met Val Thr
      355          360          365
Gln Pro Ile Thr Pro Leu Leu Tyr Ile Ser Thr Asp Leu Thr His Leu
      370          375          380
Gln Asp Leu Arg His Thr Leu His Leu Lys Ala Ile Leu Ala His Asp

```

```

385          390          395          400
Glu His Met Ala Gln Gln Asp Pro Gly Leu Pro Phe Leu Phe Trp Phe
          405          410          415
Ser Val Ala Ser Leu Ile Thr Leu Phe His Leu Phe Leu Phe Lys Leu
          420          425          430
Ile Tyr Asn Glu Tyr Cys Gly Pro Gly Ala Lys Pro Leu Phe Arg Ser
          435          440          445
Lys Glu Asp Pro Ser Val
          450

```

<210> 5585
 <211> 740
 <212> DNA
 <213> Homo sapiens

```

<400> 5585
tttttttttt gctttttttt ttttttttta ctttgaacat tagcattaag ttgggttaccg
60
tacacatcca aaggcccagc atctcagaaa aatcattagg cggcacacct gtaccagagt
120
ctcacaagaa taaaatatac aatgctacat tgagtgggta aaaatacaca aaaaagtagt
180
tttaacaatc tataaatatt ttatacttaa aatcatgatt gagttgaaat aaaaaagtg
240
atttcaattg ctaaaaaaat aatatcggtg tagttaacac aagggggaaa tcagtacatt
300
gagggatctg acaggatgct ggaaaaaatg actcaggga gccgggcagc atgggctcct
360
ttggagattc aggagcggag ctcaagtcca cctcactgca gttccctggg gccaaagcagc
420
cctcctctcc ccagtatctt tcccatctta agagatcctg tcctacctac ctgtcacctc
480
cccaacccaa agactcctct aaacttcttt gcagcatgac agctgcctgc cctacactga
540
gtctacttga ccttcaattg cgtctccgca gagaggtagg agaggacac tgccccattc
600
tggaactgac ataagtacc cagccacatg gccttcatcc ttatgaccta gcaggcagaa
660
cagggaccaa gcagcttcta ttttgtcaaa ctcttttgga caaatattca acattcaaca
720
acaagctttg taaacctaac
740

```

<210> 5586
 <211> 87
 <212> PRT
 <213> Homo sapiens

```

<400> 5586
Met Gly Ser Phe Gly Asp Ser Gly Ala Glu Leu Ser Ser Thr Ser Leu
1          5          10          15
Gln Phe Pro Gly Ala Lys Gln Pro Ser Ser Pro Gln Tyr Leu Ser His
          20          25          30
Leu Lys Arg Ser Cys Pro Thr Tyr Leu Ser Pro Pro Gln Pro Lys Asp

```



```
<400> 5588
Met Ala Pro Glu His Glu Ile Pro Lys Ile Gly Trp Tyr Ser Arg Phe
 1             5             10             15
Ala Arg His Pro Phe Tyr Gly Ser Ala Gly Val Asn Ser Gly Val Met
```

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | | | 20 | | | | 25 | | | | | 30 | | | |
| Leu | Met | Asn | Leu | Thr | Arg | Ile | Arg | Ser | Thr | Gln | Phe | Lys | Asn | Ser | Met | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Ile | Pro | Thr | Gly | Leu | Ala | Trp | Glu | Asp | Met | Leu | Tyr | Pro | Leu | Tyr | Gln | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Lys | Tyr | Lys | Asn | Ala | Ile | Thr | Trp | Gly | Asp | Gln | Asp | Leu | Leu | Asn | Ile | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Ile | Phe | Tyr | Phe | Asn | Pro | Glu | Cys | Leu | Tyr | Val | Phe | Pro | Cys | Gln | Trp | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Asn | Tyr | Arg | Pro | Asp | His | Cys | Met | Tyr | Gly | Ser | Asn | Cys | Arg | Glu | Ala | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Glu | His | Glu | Gly | Val | Ser | Val | Leu | His | Gly | Asn | Arg | Gly | Val | Tyr | His | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Asp | Asp | Lys | Gln | Pro | Thr | Phe | Arg | Ala | Leu | Tyr | Glu | Ala | Ile | Arg | Asp | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Phe | Pro | Phe | Gln | Asp | Asn | Leu | Phe | Gln | Ser | Met | Tyr | Tyr | Pro | Leu | Gln | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Leu | Lys | Phe | Leu | Glu | Thr | Val | His | Thr | Leu | Cys | Gly | Arg | Ile | Pro | Gln | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Val | Phe | Leu | Lys | Gln | Ile | Glu | Lys | Thr | Met | Lys | Arg | Ala | Tyr | Glu | Lys | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| His | Val | Ile | Ile | His | Val | Gly | Pro | Asn | Gln | Met | His | | | | | |
| | | 195 | | | | | 200 | | | | | | | | | |

```
<210> 5589
<211> 1327
<212> DNA
<213> Homo sapiens
```

```

<400> 5589
nncccccttc cccctccac agctgcctcc atttcttaa ggaagggttt ttttctctct
60
ccctcccca caccgtagcg gcgcgcgagc gggccgggcg ggcggcgag ttttccaaga
120
gataacttca ccaagatgtc cagtgatagg caaagggtccg atgatgagag cccagcacc
180
agcagtggca gttcagatgc ggaccagcga gaccagccg ctccagagcc tgaagaacaa
240
gaggaaagaa aaccttctgc caccagcag aagaaaaaca ccaaactctc tagcaaaacc
300
actgctaagt tatccactag tgctaaaaga attcagaagg agctagctga aataaccctt
360
gatcctctc ctaattgcag tgctgggcct aaaggagata acatttatga atggagatca
420
actatacttg gtccaccggg ttctgtatat gaagggtggtg tgttttttct ggatatcaca
480
ttttcatcag attatccatt taagccacca aaggttactt tccgcaccag aatctatcac
540
tgcaacatca acagtcaggg agtcatctgt ctggacatcc ttaaagacaa ctggagtccc
600
gctttgacta tttcaaagg tttgctgtct atttggtccc ttttgacaga ctgcaaccct
660
gcggatcctc tggttggaag catagccact cagtatttga ccaacagagc agaacacgac
720

```

```
<210> 5590
<211> 207
<212> PRT
<213> Homo sapiens
```

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Ser | Asp | Arg | Gln | Arg | Ser | Asp | Asp | Glu | Ser | Pro | Ser | Thr | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Gly | Ser | Ser | Asp | Ala | Asp | Gln | Arg | Asp | Pro | Ala | Ala | Pro | Glu | Pro |
| | | | 20 | | | | 25 | | | | | | 30 | | |
| Glu | Glu | Gln | Glu | Glu | Arg | Lys | Pro | Ser | Ala | Thr | Gln | Gln | Lys | Lys | Asn |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Thr | Lys | Leu | Ser | Ser | Lys | Thr | Thr | Ala | Lys | Leu | Ser | Thr | Ser | Ala | Lys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Arg | Ile | Gln | Lys | Glu | Leu | Ala | Glu | Ile | Thr | Leu | Asp | Pro | Pro | Pro | Asn |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Cys | Ser | Ala | Gly | Pro | Lys | Gly | Asp | Asn | Ile | Tyr | Glu | Trp | Arg | Ser | Thr |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Ile | Leu | Gly | Pro | Pro | Gly | Ser | Val | Tyr | Glu | Gly | Gly | Val | Phe | Phe | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Asp | Ile | Thr | Phe | Ser | Ser | Asp | Tyr | Pro | Phe | Lys | Pro | Pro | Lys | Val | Thr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Phe | Arg | Thr | Arg | Ile | Tyr | His | Cys | Asn | Ile | Asn | Ser | Gln | Gly | Val | Ile |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Cys | Leu | Asp | Ile | Leu | Lys | Asp | Asn | Trp | Ser | Pro | Ala | Leu | Thr | Ile | Ser |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Lys | Val | Leu | Leu | Ser | Ile | Cys | Ser | Leu | Leu | Thr | Asp | Cys | Asn | Pro | Ala |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Asp | Pro | Leu | Val | Gly | Ser | Ile | Ala | Thr | Gln | Tyr | Leu | Thr | Asn | Arg | Ala |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Glu | His | Asp | Arg | Ile | Ala | Arg | Gln | Trp | Thr | Lys | Arg | Tyr | Ala | Thr | |

195

200

205

<210> 5591

<211> 2194

<212> DNA

<213> Homo sapiens

<400> 5591

gcggctatgc cgtctggctc tgctcgtcct gttgctcctg gggcccggcg gctggtgcct
 60
 tgcagaacct ccacgcgaca gctgcgggag gaacttgta tcaccccgct gccttcggg
 120
 gacgtagccg ccacattcca gttccgcacg cgttgggatt cggatctgca gcgggaagga
 180
 gtgtcccatt acaggctctt ccctaaagcc ctgggacagc tgatctcaa gtattctcta
 240
 cgggagctcc acctgtcatt cagcaaggc ttttgaggga ccgatactg ggggccaccc
 300
 ttctgcagg ctccgtcagg tgcagagctc tgggtctggt tccaagacac tgtcactgat
 360
 gtggataagt cctggaggga gctcagtaat gtctctcag ggatcttctg cgctctctc
 420
 aacttcacg actccaccaa cacagtcact cccactgcct ccttcaaacc cctgggtctg
 480
 gccaatgaca ctgaccacta ctttctgcgc tatgctgtgc tgccgcggga ggtggtctgc
 540
 accgaaaacc tcacccctg gaagaagctc ttgccctgta gttccaaggc aggcctctct
 600
 gtgctgctga aggcagatcg cttgttcac accagctacc actcccaggc agtgcatatc
 660
 cgccctgttt gcagaaatgc acgctgtact agcatctct gggagctgag gcagaccctg
 720
 tcagttgtat ttgatgcctt catcacgggg cagggaaga aagactggtc cctcttcgg
 780
 atgttctccc gaaccctcac ggagccctgc cccctggctt cagagagccg agtctatgtg
 840
 gacatcacca cctacaacca gccctgcctt tgtgtccagg acaacgagac attagagggtg
 900
 caccacccc cgaccactac atatcaggac gtcactcctag gactcggaa gacctatgcc
 960
 atctatgact tgettgcac cgccatgatc acaactctc gaaacctcaa catccagctc
 1020
 aagtgaaga gacccccaga gaatgaggcc ccccagtg ccttctgca tgcccagcgg
 1080
 tacgtgagtg gctatgggct gcagaagggg gagctgagca cactgctgta caacaccac
 1140
 ccataccggg ccttcccggg gctgctgctg gacaccgtac cctggatatc gcggctgtat
 1200
 gtgcacaccc tcaccatcac ctccaagggc aaggagaaca aaccaagta catccactac
 1260
 cagcctgcc aggaccggct gcaacccac ctctggaga tgctgattca gctgccggcc
 1320
 aactcagtca ccaaggtttc catccagttt gagcgggccc tgctgaagtg gaccgagtac
 1380

acaccagatc ctaaccatgg cttctatgtc agcccatctg tcctcagcgc ccttggtgcc
 1440
 agcatggtag cagccaagcc agtggactgg gaagagagtc ccctcttcaa cagcctgttc
 1500
 ccagtctctg atggctctaa ctactttgtg cggctctaca cggagccgct gctggtgaac
 1560
 ctgccgacac cggacttcag catgccctac aacgtgatct gcctcacgtg cactgtggtg
 1620
 gccgtgtgct acggctcctt ctacaatctc ctcacccgaa ccttcacat cgaggagccc
 1680
 cgcacaggtg gcctggccaa gcggctggcc aaccttatcc ggcgcgcccg aggtgtcccc
 1740
 ccactctgat tcttgccctt tccagcagct gcagctgccg tttctctctg gggaggggag
 1800
 cccaagggtt gtttctgcca cttgctctcc tcagagttag cttttgaacc aaagtgcctt
 1860
 ggaccaggtc agggcctaca gctgtgttgt ccagtacagg agccacgagc caaatgtggc
 1920
 atttgaattt gaattaactt agaaattcat ttctcacct gtagtggcca cctctatatt
 1980
 gaggtgtca ataagcaaaa gtggctcggg gctgctgtat tggacagcac agaaaaagat
 2040
 ttccatcacc acagaaaggt cggctggcag cactggccaa ggtgatgggg tgtgctacac
 2100
 agtgtatgtc actgtgtagt ggatggagtt tactgtttgt ggaataaaaa cggctgtttc
 2160
 cgtgaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 2194

<210> 5592

<211> 580

<212> PRT

<213> Homo sapiens

<400> 5592

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------|
| Met | Pro | Ser | Gly | Ser | Ala | Arg | Pro | Val | Ala | Pro | Gly | Ala | Arg | Arg | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Pro | Cys | Arg | Thr | Pro | Thr | Arg | Gln | Leu | Arg | Glu | Glu | Leu | Val | Ile |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Pro | Leu | Pro | Ser | Gly | Asp | Val | Ala | Ala | Thr | Phe | Gln | Phe | Arg | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | Trp | Asp | Ser | Asp | Leu | Gln | Arg | Glu | Gly | Val | Ser | His | Tyr | Arg | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Phe | Pro | Lys | Ala | Leu | Gly | Gln | Leu | Ile | Ser | Lys | Tyr | Ser | Leu | Arg | Glu |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Leu | His | Leu | Ser | Phe | Thr | Gln | Gly | Phe | Trp | Arg | Thr | Arg | Tyr | Trp | Gly |
| | | | | 85 | | | | 90 | | | | | | 95 | Pro Phe Leu |
| Gln | Ala | Pro | Ser | Gly | Ala | Glu | Leu | Trp | Val | Trp | Phe | | | | |
| | | | 100 | | | | | 105 | | | | | | 110 | |
| Gln | Asp | Thr | Val | Thr | Asp | Val | Asp | Lys | Ser | Trp | Arg | Glu | Leu | Ser | Asn |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Val | Leu | Ser | Gly | Ile | Phe | Cys | Ala | Ser | Leu | Asn | Phe | Ile | Asp | Ser | Thr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asn | Thr | Val | Thr | Pro | Thr | Ala | Ser | Phe | Lys | Pro | Leu | Gly | Leu | Ala | Asn |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Asp | Thr | Asp | His | Tyr | Phe | Leu | Arg | Tyr | Ala | Val | Leu | Pro | Arg | Glu | Val |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Val | Cys | Thr | Glu | Asn | Leu | Thr | Pro | Trp | Lys | Lys | Leu | Leu | Pro | Cys | Ser |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Ser | Lys | Ala | Gly | Leu | Ser | Val | Leu | Leu | Lys | Ala | Asp | Arg | Leu | Phe | His |
| | | 195 | | | | | 200 | | | | 205 | | | | |
| Thr | Ser | Tyr | His | Ser | Gln | Ala | Val | His | Ile | Arg | Pro | Val | Cys | Arg | Asn |
| | 210 | | | | 215 | | | | | | 220 | | | | |
| Ala | Arg | Cys | Thr | Ser | Ile | Ser | Trp | Glu | Leu | Arg | Gln | Thr | Leu | Ser | Val |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Val | Phe | Asp | Ala | Phe | Ile | Thr | Gly | Gln | Gly | Lys | Lys | Asp | Trp | Ser | Leu |
| | | | 245 | | | | | 250 | | | | | | 255 | |
| Phe | Arg | Met | Phe | Ser | Arg | Thr | Leu | Thr | Glu | Pro | Cys | Pro | Leu | Ala | Ser |
| | | 260 | | | | | 265 | | | | | | 270 | | |
| Glu | Ser | Arg | Val | Tyr | Val | Asp | Ile | Thr | Thr | Tyr | Asn | Gln | Pro | Cys | Leu |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Cys | Val | Gln | Asp | Asn | Glu | Thr | Leu | Glu | Val | His | Pro | Pro | Pro | Thr | Thr |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Thr | Tyr | Gln | Asp | Val | Ile | Leu | Gly | Thr | Arg | Lys | Thr | Tyr | Ala | Ile | Tyr |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Asp | Leu | Leu | Asp | Thr | Ala | Met | Ile | Asn | Asn | Ser | Arg | Asn | Leu | Asn | Ile |
| | | | 325 | | | | | 330 | | | | | | 335 | |
| Gln | Leu | Lys | Trp | Lys | Arg | Pro | Pro | Glu | Asn | Glu | Ala | Pro | Pro | Val | Pro |
| | | 340 | | | | | | 345 | | | | | 350 | | |
| Phe | Leu | His | Ala | Gln | Arg | Tyr | Val | Ser | Gly | Tyr | Gly | Leu | Gln | Lys | Gly |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Glu | Leu | Ser | Thr | Leu | Leu | Tyr | Asn | Thr | His | Pro | Tyr | Arg | Ala | Phe | Pro |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Val | Leu | Leu | Leu | Asp | Thr | Val | Pro | Trp | Tyr | Leu | Arg | Leu | Tyr | Val | His |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Thr | Leu | Thr | Ile | Thr | Ser | Lys | Gly | Lys | Glu | Asn | Lys | Pro | Ser | Tyr | Ile |
| | | | 405 | | | | | | 410 | | | | | 415 | |
| His | Tyr | Gln | Pro | Ala | Gln | Asp | Arg | Leu | Gln | Pro | His | Leu | Leu | Glu | Met |
| | | 420 | | | | | | 425 | | | | | 430 | | |
| Leu | Ile | Gln | Leu | Pro | Ala | Asn | Ser | Val | Thr | Lys | Val | Ser | Ile | Gln | Phe |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Glu | Arg | Ala | Leu | Leu | Lys | Trp | Thr | Glu | Tyr | Thr | Pro | Asp | Pro | Asn | His |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Gly | Phe | Tyr | Val | Ser | Pro | Ser | Val | Leu | Ser | Ala | Leu | Val | Pro | Ser | Met |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Val | Ala | Ala | Lys | Pro | Val | Asp | Trp | Glu | Glu | Ser | Pro | Leu | Phe | Asn | Ser |
| | | | 485 | | | | | 490 | | | | | | 495 | |
| Leu | Phe | Pro | Val | Ser | Asp | Gly | Ser | Asn | Tyr | Phe | Val | Arg | Leu | Tyr | Thr |
| | | 500 | | | | | | 505 | | | | | 510 | | |
| Glu | Pro | Leu | Leu | Val | Asn | Leu | Pro | Thr | Pro | Asp | Phe | Ser | Met | Pro | Tyr |
| | 515 | | | | | | 520 | | | | | 525 | | | |
| Asn | Val | Ile | Cys | Leu | Thr | Cys | Thr | Val | Val | Ala | Val | Cys | Tyr | Gly | Ser |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Phe | Tyr | Asn | Leu | Leu | Thr | Arg | Thr | Phe | His | Ile | Glu | Glu | Pro | Arg | Thr |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Gly | Gly | Leu | Ala | Lys | Arg | Leu | Ala | Asn | Leu | Ile | Arg | Arg | Ala | Arg | Gly |
| | | | 565 | | | | | 570 | | | | | | 575 | |
| Val | Pro | Pro | Leu | | | | | | | | | | | | |

580

<210> 5593

<211> 3078

<212> DNA

<213> Homo sapiens

<400> 5593

```

nggacactgc agccggagtc cgggaggggc cgcgccgcc cgtctgaac taggatgtcc
60
cgacatgaag gtgtcagctg tgatgcatgt ttaaaaggaa attttcgagg tcgcagatat
120
aagtgtttta tttgctacga ttacgatctt tgtgcatctt gttatgaaag tggtgcaaca
180
acaacaaggc atacaactga ccaccaatg cagtgcata taacaagggt agattttgat
240
ttatactatg gtggggaagc tttctctgta gagcagccac agtcttttac ttgtccctat
300
tgtggaaaaa tgggctatac ggagacatct cttcaagaac atgttacttc tgaacatgca
360
gaaacatcaa cagaagtgat ttgtccaata tgtgcagcgt tacctggagg cgatccta
420
catgtcacgg atgactttgc agctcatctt acacttgaac acagagcccc tagagattta
480
gatgaatcga gtgggtgttcg acatgtacgt agaatgtttc accctggccg gggattagga
540
ggctctcgtg ctcttagatc aaacatgcac tttactagca gttctactgg tggactttct
600
tcttctcaga gttcatattc tccaagcaat agggaagcca tggatcctat agctgagctt
660
ttatctcagt tatcaggagt gagacgttct gcaggaggac agcttaattc ctctggccct
720
tccgtttctc agttacaaca actgcagatg cagctgcagc tagaacggca gcatgcccag
780
gcagcacggc aacaactgga gaccgcacgc aacgcaaccc ggcgtactaa cacaagcagt
840
gtcaccacta caatcacaca atccacagca acaaccaaca tagctaatac agaaagcagt
900
cagcagactc tacagaattc ccagtttctt ttaacaagggt tgaatgatcc taaaatgtct
960
gaaacggagc gccagtcctat ggaaagcgag cgtgcagacc gcagcctgtt tgtccaagag
1020
ctccttctgt ccacttttagt gcgtgaagag agctcatcct cagatgagga tgatcggggg
1080
gagatggcag attttggtgc tatgggctgt gtagatatta tgcctttaga tgttgcttta
1140
gaaaacctaa atttaaaaga gagtaataaa ggaaatgagc ctccaccacc tcctctttga
1200
tgacatccca attcgagac aatgtcctct gtgctgtatt tgccaatgaa agtggaaca
1260
aactatcttg ggtttgtttg gtgattgtaa tttcaggtct gtcactcttg ttacattgtg
1320
tacattcaaa aggaagagag aaaatatata tgataatcat ttccacttaa ctaattttta
1380

```

cttctagcag gtaaagttag gtagcagtgc aggggtgatc tctgcttcct gtaccttgac
1440
atgcaaaagg ctctcctaata actccacatt caaactgaag aggaaaattg aaatctcttaa
1500
tgaagctgct gtgtgtatatt atgaatatta atgaataaaa actgcttgga tggtttacct
1560
taactactgc atgaggtttt ttgcagcgtg catgagtttt agtgaccttg ttatttaaga
1620
agttaaatac aaggagtaaa acttaaaaaa aaaatacaaa gcccaaagct ttcccaaaca
1680
ttattcaatg gttacacgac gaagtagctt ttgaataatg tctgcctgaa tcacctttct
1740
ttgtgtgcct cctacgcaca aagccagctc tgcagtggaa tctggggatt atagccgggt
1800
gtggcactcc gccctgtgtg actgtcctgt cgccctgtta gtcactctgc ctgtgtggag
1860
ctcagcctgt ctctttaact catctgtaga agacacacca gtaaagctac tgttgaatc
1920
tgctgcaggg gcctttgtgt gccctaaaaa caaatcctgt tcatgtttgt ttaaagtttt
1980
tactttttgt ggttgtttta aattttttca attgttaaata atgttttatt caggtgtaga
2040
tgaatttcat ttattgactg ttcaacagag ttaacctgaa ttatgttgc tttgttttta
2100
aaaatctcac attctcaatc atattttgca ttatttatgt atttgctttg tagtttgctg
2160
agacagatca gtatcagggg agctttgagg atttgccttc ccagatttgt cagtatatta
2220
caaccaaatt cttaatgcta attttagcac cttttattta ttgggttttt tctggcataa
2280
aaagtaaagc cttttaattg aatcatgcc cctatatgcc tatattatta atcctatgtg
2340
taaaaaaaat gtacagcttt ttttgggttt gttttggggt ttggaagggc cgggttattt
2400
tttttttcct gtttcagttt ttgtgcatag actttcacia tagctccaag gcagggacag
2460
cgggtttggg ggttgggagg gcagtttttg gaatgtaaat ttaggacttt taaaaaggtg
2520
cgcacagctt ctgataaatt tataactaga cttaacctaa tcatgtctcg ttccagttct
2580
cttttctctg agcccttttc aaagtctcct ctctttctcc tgtcctcctt ttcctttcct
2640
gtccgtgtat ctccgtttct tcaacatgac aagcatacag acttgaacac ccctccggtg
2700
ttcttccgag aactgtgaag tccatgttca tccaaatgta accaaaaaag aagtcaccct
2760
acatgtctga aaaactgttg cttctcctct gaaacttcaa actccaacga tttccaaata
2820
caatagcttt gttttcttta gttctgtaat ggataatgtt taaaggaaaa ctttacacca
2880
ggcttctggt tacactagaa gtcaagccca ttagggattt tcattttttt tcatttggtt
2940
gttgagaagt ttcaaaaatc agttttcaag ctgtgggtct tcaaacacat ctgcacataa
3000

gtcacacatt tcaataaagc attttcaaga ctgttgaaaa aaaaaaaaaa aaaaaaaaaa

3060

aaaaaaaaaa aaaaaaaaaa

3078

<210> 5594

<211> 296

<212> PRT

<213> Homo sapiens

<400> 5594

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Tyr | Thr | Glu | Thr | Ser | Leu | Gln | Glu | His | Val | Thr | Ser | Glu | His |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Ala | Glu | Thr | Ser | Thr | Glu | Val | Ile | Cys | Pro | Ile | Cys | Ala | Ala | Leu | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Gly | Asp | Pro | Asn | His | Val | Thr | Asp | Asp | Phe | Ala | Ala | His | Leu | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Glu | His | Arg | Ala | Pro | Arg | Asp | Leu | Asp | Glu | Ser | Ser | Gly | Val | Arg |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| His | Val | Arg | Arg | Met | Phe | His | Pro | Gly | Arg | Gly | Leu | Gly | Gly | Pro | Arg |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Ala | Arg | Arg | Ser | Asn | Met | His | Phe | Thr | Ser | Ser | Ser | Thr | Gly | Gly | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ser | Ser | Ser | Gln | Ser | Ser | Tyr | Ser | Pro | Ser | Asn | Arg | Glu | Ala | Met | Asp |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Pro | Ile | Ala | Glu | Leu | Leu | Ser | Gln | Leu | Ser | Gly | Val | Arg | Arg | Ser | Ala |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gly | Gly | Gln | Leu | Asn | Ser | Ser | Gly | Pro | Ser | Ala | Ser | Gln | Leu | Gln | Gln |
| | | 130 | | | | | 135 | | | | | 140 | | | |
| Leu | Gln | Met | Gln | Leu | Gln | Leu | Glu | Arg | Gln | His | Ala | Gln | Ala | Ala | Arg |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Gln | Gln | Leu | Glu | Thr | Ala | Arg | Asn | Ala | Thr | Arg | Arg | Thr | Asn | Thr | Ser |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Ser | Val | Thr | Thr | Thr | Ile | Thr | Gln | Ser | Thr | Ala | Thr | Thr | Asn | Ile | Ala |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asn | Thr | Glu | Ser | Ser | Gln | Gln | Thr | Leu | Gln | Asn | Ser | Gln | Phe | Leu | Leu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Thr | Arg | Leu | Asn | Asp | Pro | Lys | Met | Ser | Glu | Thr | Glu | Arg | Gln | Ser | Met |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Glu | Ser | Glu | Arg | Ala | Asp | Arg | Ser | Leu | Phe | Val | Gln | Glu | Leu | Leu | Leu |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | |
| Ser | Thr | Leu | Val | Arg | Glu | Glu | Ser | Ser | Ser | Ser | Asp | Glu | Asp | Asp | Arg |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Gly | Glu | Met | Ala | Asp | Phe | Gly | Ala | Met | Gly | Cys | Val | Asp | Ile | Met | Pro |
| | | 260 | | | | | 265 | | | | | | 270 | | |
| Leu | Asp | Val | Ala | Leu | Glu | Asn | Leu | Asn | Leu | Lys | Glu | Ser | Asn | Lys | Gly |
| | | 275 | | | | | 280 | | | | | | 285 | | |
| Asn | Glu | Pro | Pro | Pro | Pro | Pro | Leu | | | | | | | | |
| | 290 | | | | | 295 | | | | | | | | | |

<210> 5595

<211> 1515

<212> DNA

<213> Homo sapiens

<400> 5595

ntgatccctg gctcagacag ttcagtggga gaatccaaag gccttttccc tccttctga
60
gcctccggga aaggagggag ggatcttggg tccaggggtct cagtaccccc tgtgccattt
120
gagctgcttg cgctcatcat ctctattaat aaccaacttc cctccccac tgccagtgt
180
gccccacgc ctgccagct cgtgttctcc ggtcacagca gctcagtcct ccaaagctgc
240
tggaccccag gggagagctg accactgccc gagcagccgg ctgaatccac ctccacaatg
300
ccgctctcag gaaccccggc ccctaataag aagaggaaat ccagcaagct gatcatggaa
360
ctcactggag gtggacagga gagctcaggc ttgaacctgg gcaaaaagat cagtgtccca
420
agggatgtga tgttgaggga actgtcgctg cttaccaacc ggggctccaa gatgttcaaa
480
ctgcggcaga tgagggtgga gaagtttatt tatgagaacc accctgatgt tttctctgac
540
agctcaatgg atcacttcca gaagttcctt ccaacagtgg ggggacagct gggcacagct
600
ggtcagggat tctcatacag caagagcaac ggcagaggcg gcagccaggc agggggcagt
660
ggctctgccg gacagtatgg ctctgatcag cagcaccatc tgggctctgg gtctggagct
720
gggggtacag gtggtcccgc gggccaggct ggcagaggag gagctgctgg cacagcaggg
780
gttggtgaga caggatcagg agaccaggca ggcggagaag gaaaacatat cactgtgttc
840
aagacctata tttcccatg ggagcgagcc atgggggttg acccccagca aaaaatggaa
900
cttggcattg acctgctggc ctatggggcc aaagctgaac ttcccaaata taagtccttc
960
aacaggacgg caatgccta tgggtggatat gagaaggcct ccaaacgcat gaccttcag
1020
atgcccaagt ttgacctggg gcccttgctg agtgaacccc tggtcctcta caacaaaac
1080
ctctccaaca ggccttcttt caatcgaacc cctattccct ggctgagctc tggggagcct
1140
gtagactaca acgtggatat tggcatcccc ttggatggag aaacagagga gctgtgaggt
1200
gtttcctcct ctgatttgca tcatttcccc tctctggctc caatttgag agggaatgct
1260
gagcagatag ccccatgtgt taatccagta tccttatggg aatggaggga aaaaggagag
1320
atctaccttt ccactcttta ctccaagtcc ccactccacg catccttcct caccaactca
1380
gagctcccc tctacttgct ccatatggaa cctgctcggt tatggaattt gctctgccac
1440
cagtaacagt caataaactt caaggaaaat gaactcatte ttcctttgat atttgagagc
1500
agatgaaagc cgagg
1515

<210> 5596
 <211> 299
 <212> PRT
 <213> Homo sapiens

<400> 5596
 Met Pro Leu Ser Gly Thr Pro Ala Pro Asn Lys Lys Arg Lys Ser Ser
 1 5 10 15
 Lys Leu Ile Met Glu Leu Thr Gly Gly Gln Glu Ser Ser Gly Leu
 20 25 30
 Asn Leu Gly Lys Lys Ile Ser Val Pro Arg Asp Val Met Leu Glu Glu
 35 40 45
 Leu Ser Leu Leu Thr Asn Arg Gly Ser Lys Met Phe Lys Leu Arg Gln
 50 55 60
 Met Arg Val Glu Lys Phe Ile Tyr Glu Asn His Pro Asp Val Phe Ser
 65 70 75 80
 Asp Ser Ser Met Asp His Phe Gln Lys Phe Leu Pro Thr Val Gly Gly
 85 90 95
 Gln Leu Gly Thr Ala Gly Gln Gly Phe Ser Tyr Ser Lys Ser Asn Gly
 100 105 110
 Arg Gly Gly Ser Gln Ala Gly Gly Ser Gly Ser Ala Gly Gln Tyr Gly
 115 120 125
 Ser Asp Gln Gln His His Leu Gly Ser Gly Ser Gly Ala Gly Gly Thr
 130 135 140
 Gly Gly Pro Ala Gly Gln Ala Gly Arg Gly Gly Ala Ala Gly Thr Ala
 145 150 155 160
 Gly Val Gly Glu Thr Gly Ser Gly Asp Gln Ala Gly Gly Glu Gly Lys
 165 170 175
 His Ile Thr Val Phe Lys Thr Tyr Ile Ser Pro Trp Glu Arg Ala Met
 180 185 190
 Gly Val Asp Pro Gln Gln Lys Met Glu Leu Gly Ile Asp Leu Leu Ala
 195 200 205
 Tyr Gly Ala Lys Ala Glu Leu Pro Lys Tyr Lys Ser Phe Asn Arg Thr
 210 215 220
 Ala Met Pro Tyr Gly Gly Tyr Glu Lys Ala Ser Lys Arg Met Thr Phe
 225 230 235 240
 Gln Met Pro Lys Phe Asp Leu Gly Pro Leu Leu Ser Glu Pro Leu Val
 245 250 255
 Leu Tyr Asn Gln Asn Leu Ser Asn Arg Pro Ser Phe Asn Arg Thr Pro
 260 265 270
 Ile Pro Trp Leu Ser Ser Gly Glu Pro Val Asp Tyr Asn Val Asp Ile
 275 280 285
 Gly Ile Pro Leu Asp Gly Glu Thr Glu Glu Leu
 290 295

<210> 5597
 <211> 2240
 <212> DNA
 <213> Homo sapiens

<400> 5597
 ctctaattccc ctttcttgac tcttccaagt caggattctc accaaggaag ctatctgcct
 60

tctttgggaa tgttgggctt atgaagactt gagataatgg ggttcatgta ttcagactct
120
ttagcatata cagtagagtt tctaattgttgc tcagcattcc ctagtgggag gttacaagtt
180
aggttgggat tctaatacata ttttatgata tctcacagat taaattgcac tttgtctctg
240
cccagtcttg attccctttt ggccagcagt ttttaggtct gtcagtactg cactgcaaga
300
atggcagatt ttgggatctc tgctggccag tttgtggcag tgggtctggga taagtcattc
360
ccagtggagg ctctgaaagg tctggtggat aagcttcaag cgttaaccgg caatgagggc
420
cgctgtctg tggaatacat caagcagctg ttgcaatctg ccacaaaga atccagcttt
480
gacattattt tgtcagggtt agtcccagga agcaccactc tgcacagtgc tgagattttg
540
gctgaaatcg ccggatcct tcggcctggg ggatgtcttt ttctgaagga gccagtagag
600
acagctgtag ataacaatag caaagtgaag acagcatcta agctgtgttc agccctgact
660
ctttctggtc ttgtggaagt gaaagagctg cagcgggagc ccctaaccct tgaggaagta
720
cagtctgttc gagaacacct tggatcatgaa agtgacaacc tgctgtttgt tcagatcaca
780
ggcaaaaaac caaactttga agtgggttct tctaggcagc ttaagctttc catcaccaag
840
aagtcttctc cttcagtga aacctgtgtg gacctgtctg ctgccaagct gtggaccctc
900
tcagccaacg atatggagga cgacagcatg gatctcattg actcagatga gctgctggat
960
ccagaagatt tgaagaagcc agatccagct tccctgcggg ctgcttcttg tggggaaggg
1020
aaaaagagga aggcctgtaa gaactgcacc tgtggccttg ccgaagaact ggaaaaagag
1080
aagtcaaggg aacagatgag ctcccaacc aagtcagctt gtggaaactg ctacctgggc
1140
gatgccttcc gctgtgccag ctgcccctac cttgggatgc cagccttcaa acctggggaa
1200
aaggtgcttc tgagtgatag caatcttcat gatgcctagg aggttctctga catgggaccc
1260
atctgtctct ccagccaact cctgtccctc acatcccacc atggtggctc ctcccacctc
1320
ctctggattt gttcactctg agatctgttt gcagagtggg tgcttagcag acagagtga
1380
gctggctggg gggcacagtg gtgtgtagtg ctgctgtgta tcaaaagacc aaggtattat
1440
gggacctggt ttcagaatgg gatgggtttc ttcacctcat gttaagagaa gggagtgtgt
1500
cctgaagaag ccttcttctt gatgttaaaa tgctgaccag aacgtctctg agcccaggca
1560
tcgttgagca ttaacactct gtgacagagc tgcagacccc tgccttgagt ctcatctcag
1620
caatgtctgc acctcttctt ctttcagagt tgttagttta ctccattctt tgtgacacga
1680

gtcaagtggc tcacaacctc ctcagggcac cagaggactc actcactggg tgctgtgatg
 1740
 atatccagtg tccctctgcc cccttccatc cccaaccaca tttgactgta gcattgcac
 1800
 tgtgtcctgt tgtcatttat gttaaccttc aggtattaaa cttgctgcat atcttgacat
 1860
 atcttgagat tctgcatgtc ttgtaaagag aggggatgtg catttggtgtg tgatggtgga
 1920
 tagtcatcca cgctcagttt ggaccattgg aggaacttag tgtcacgcac aaatggggct
 1980
 attcctacgc ttagaatagg gcttgtctgc ccactttaga agagtccagg ttggtgagca
 2040
 tttagagga agcagggcag aactctgaac gacaatacgt ctctctgagc agagaccct
 2100
 ttgttcttgt tatccacca tatggacttg gaatcaatct tgccaaatat ttggagagat
 2160
 tgtgtggatt taagagacct ggatttttat attttaccag taaataaaag ttttcattga
 2220
 tatctgtcct tgaaaaaaaaa
 2240

<210> 5598

<211> 312

<212> PRT

<213> Homo sapiens

<400> 5598

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Asp | Phe | Gly | Ile | Ser | Ala | Gly | Gln | Phe | Val | Ala | Val | Val | Trp |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asp | Lys | Ser | Ser | Pro | Val | Glu | Ala | Leu | Lys | Gly | Leu | Val | Asp | Lys | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Ala | Leu | Thr | Gly | Asn | Glu | Gly | Arg | Val | Ser | Val | Glu | Asn | Ile | Lys |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Gln | Leu | Leu | Gln | Ser | Ala | His | Lys | Glu | Ser | Ser | Phe | Asp | Ile | Ile | Leu |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Ser | Gly | Leu | Val | Pro | Gly | Ser | Thr | Thr | Leu | His | Ser | Ala | Glu | Ile | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ala | Glu | Ile | Ala | Arg | Ile | Leu | Arg | Pro | Gly | Gly | Cys | Leu | Phe | Leu | Lys |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Glu | Pro | Val | Glu | Thr | Ala | Val | Asp | Asn | Asn | Ser | Lys | Val | Lys | Thr | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ser | Lys | Leu | Cys | Ser | Ala | Leu | Thr | Leu | Ser | Gly | Leu | Val | Glu | Val | Lys |
| | | | 115 | | | | 120 | | | | | | 125 | | |
| Glu | Leu | Gln | Arg | Glu | Pro | Leu | Thr | Pro | Glu | Glu | Val | Gln | Ser | Val | Arg |
| | | | 130 | | | | 135 | | | | 140 | | | | |
| Glu | His | Leu | Gly | His | Glu | Ser | Asp | Asn | Leu | Leu | Phe | Val | Gln | Ile | Thr |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Gly | Lys | Lys | Pro | Asn | Phe | Glu | Val | Gly | Ser | Ser | Arg | Gln | Leu | Lys | Leu |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Ser | Ile | Thr | Lys | Lys | Ser | Ser | Pro | Ser | Val | Lys | Pro | Ala | Val | Asp | Pro |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Ala | Ala | Ala | Lys | Leu | Trp | Thr | Leu | Ser | Ala | Asn | Asp | Met | Glu | Asp | Asp |
| | | | 195 | | | | 200 | | | | | 205 | | | |
| Ser | Met | Asp | Leu | Ile | Asp | Ser | Asp | Glu | Leu | Leu | Asp | Pro | Glu | Asp | Leu |

| | | |
|---|-----|-----|
| 210 | 215 | 220 |
| Lys Lys Pro Asp Pro Ala Ser Leu Arg Ala Ala Ser Cys Gly Glu Gly | | |
| 225 | 230 | 235 |
| Lys Lys Arg Lys Ala Cys Lys Asn Cys Thr Cys Gly Leu Ala Glu Glu | | 240 |
| | 245 | 250 |
| Leu Glu Lys Glu Lys Ser Arg Glu Gln Met Ser Ser Gln Pro Lys Ser | | 255 |
| | 260 | 265 |
| Ala Cys Gly Asn Cys Tyr Leu Gly Asp Ala Phe Arg Cys Ala Ser Cys | | 270 |
| | 275 | 280 |
| Pro Tyr Leu Gly Met Pro Ala Phe Lys Pro Gly Glu Lys Val Leu Leu | | 285 |
| | 290 | 295 |
| Ser Asp Ser Asn Leu His Asp Ala | | 300 |
| 305 | 310 | |

<210> 5599

<211> 4492

<212> DNA

<213> Homo sapiens

<400> 5599

```

ttcccggccc cagccaaggc tgcggtttac gtgtcggaca ttcaggagct gtacatccgt
60
gtggttgaca aggtggagat tgggaagaca gtgaaggcat acgtccgcgt gctggacttg
120
cacaagaagc ccttccttgc caaatacttc ccctttatgg acctgaagct ccgagcagcc
180
tccccgatca ttacattggt ggcccttgat gaagcccttg acaactacac catcacattc
240
ctcatccgcg gtgtggccat cggccagacc agtctaactg caagtgtgac caataaagct
300
ggacagagaa tcaactcagc ccacaaacag attgaagtct ttccccggtt caggctgatg
360
cccaggaagg tgacactgct tatcggggcc acgatgcagg tcacctccga gggcggcccc
420
cagcctcagt ccaacatcct tttctccatc agcaatgaga gcgttgcgct ggtgagcgct
480
gctgggctgg tacagggcct cgccatcggg aacggcactg tgtctgggct cgtgcaggca
540
gtggatgcag agaccggcaa ggtggtcac atctctcagg acctcgtgca ggtggagggtg
600
ctgctgctaa gggccgtgag gatccgcgcc cccatcatgc ggatgaggac gggcaccag
660
atgccatct atgtcaccgg catcaccaac caccagaacc ctttctcctt tggcaatgcc
720
gtgccaggcc tgaccttcca ctgggtctgtc accaagcggg acgtcctgga cctccgaggg
780
cggcaccacg aggcgtcgat ccgactcccg tcacagtaca actttgccat gaacgtgctc
840
ggccggggtaa aaggccggac cgggctgagg gtggtggtca aggctgtgga cccacatcg
900
gggcagctgt atggcctggc cagagaactc tcggatgaga tccaagtcca ggtgtttgag
960
aagctgcagc tgctcaaccc tgaaatagaa gcagaacaaa tattaatgtc gcccaactca
1020

```

tatataaagc tgcagacaaa cagggatggt gcagcctctc tgagctaccg cgtcctggat
1080
ggacccgaaa aggttccagt tgtgcatggt gatgagaaag gctttctagc atcaggggtct
1140
atgatcggga catccaccat cgaagtgatt gcacaagagc cctttggggc caaccaaacc
1200
atcattgttg ctgtaaaggt atccctggtt tcctacctga gggtttccat gagccctgtc
1260
ctgcacaccc agaacaagga ggccctggtg gccgtgcctt tgggaatgac cgtgaccttc
1320
actgtccact tccacgacaa ctctggagat gtcttccatg ctcacagttc ggtectcaac
1380
tttgccacta acagagacga ctttgtgcag atcgggaagg gccccaccaa caacacctgt
1440
gttgtccgca cagtcagcgt gggcctgaca ctgctccgtg tgtgggacgc agagcacccg
1500
ggcctctcgg acttcatgcc cctgcctgtc ctacaggcca tctccccaga gctgtctggg
1560
gccatggtgg tgggggacgt gctctgtctg gccactgttc tgaccagcct ggaaggcctc
1620
tcaggaacct ggagctcctc ggccaacagc atcctccaca tcgaccccaa gacgggtgtg
1680
gctgtggccc gggcctggtg atccgtgacg gtttactatg aggtcgtctg gcacctgagg
1740
acctacaagg aggtggtggt cagcgtccct cagaggatca tggcccgta cctccacccc
1800
atccagacaa gcttccagga ggctacagcc tccaaagtga ttgttgccgt gggagacaga
1860
agctctaacc tgagaggcga gtgcaccccc acccagaggg aagtcatcca ggccttgac
1920
ccagagaccc tcatcagctg ccagtcccag ttcaagccgg cgtctttga tttcccatct
1980
caagatgtgt tcaccgtgga gccacagttt gacactgtc tcggccagta cttctgtctca
2040
atcacaatgc acaggctgac ggacaagcag cggaagcacc tgagcatgaa gaagacagct
2100
ctggtggtca gtgcctccct ctccagcagc cacttctcca cagagcaggt gggggccgag
2160
gtgcccttca gccaggtct cttcgccgac caggctgaaa tccttttgag caaccactac
2220
accagttccg agatcagggt ctttggtgcc ccggagggtc tggagaactt ggaggtgaaa
2280
tccgggtccc cggccgtgct ggcattcgca aaggagaagt cttttgggtg gccagcttc
2340
atcacatata cggtcggcgt ctcgacccc gcggtggca gccaagggcc tctgtccact
2400
accctgacct tctccagccc cgtgaccaac caagccattg ccatcccagt gacagtggct
2460
tttgtgatgg atcgccgtgg gcccggtcct tatggagcca gcctcttcca gcacttcctg
2520
gattcctacc aggtcatggt cttcacgtc ttgcacctgt tggctgggac agcggtcagt
2580
atcatagcct accacactgt ctgcacgccc cgggatcttg ctgtgcctgc agccctcacg
2640

cctcgagcca gccctggaca cagccccac tatttcgctg cctcatcacc cacatctccc
2700
aatgcattgc ctctgctcg caaagccagc cctccctcag ggctgtggag cccagcctat
2760
gcctcccact aggcgcgctg aagggtcccg gaggatgggt ctcagccgag cctcgtgcac
2820
ccccaagatg gaacatccct gctgcattca cactggaaca agcccccca gatgagtgcc
2880
ccggccccag gccagcttca ctgccgtctc ttcacacaga gctgtagttt cggctctgcc
2940
cattagctca ttttatgtag gagttttaaa tgtgtgtttt tttcctttca agtcttacia
3000
agctaagact ttttggtcga ttcctttttg catgggtgtc tagggtttct ggacaatgtg
3060
ctgttgcat tttattttcc tagccttgct aaaatctttc cttctcaag actttgagca
3120
gttagaagtg ctcttttagaa gttgtctgtg ggtgatgtta ctgtagtggc ctcagggaaa
3180
ggattgtcca gttacttttag ggggtttttg gtggggtttt tccccctgtg aaaacttact
3240
ttgcccctag tctggctgct gctaggactt ctgaggagca atgggacatg agtgtccctg
3300
tatctgcgcc actgccgcaa ggggaagctc aggaaccagc acctggaggc caggatagcc
3360
aagccctggg tgagcgagag gctggagaac acaggagctc acccagggct gctgccaac
3420
catgggccac tgtgaacaga cttcagtcct ctgtttttgt ttcataagcc gttgagacat
3480
ctgatggact tggcttaggc cctgctggga catcccacgt gtgatccctt tcaactccatc
3540
aggacaccag gactgtcctt aggaaaatgt ccttgagatg gcagcaggag tcatattttc
3600
tgtgtgtgtg tttcggaaag ccgctgtgtc ctgcctcagc acaaagaccc agtgtcattt
3660
gctcctcctg ttctgtgcc actccagaac ctcagcagat ctgagccacc gcctgccagt
3720
gtgagaggcg gccactttca tggcagctca tcaggcgcag ggccccagac agcttcccag
3780
caggccctag agcccggcct gggccaatga tggagggcgg ccaccagccc agggcctgcc
3840
catccagaag ggactcccca gggcctgggg gaggagaccc ttggaaaagt cctctcttcc
3900
cagctcctga ttctggatct gagattctca gatcacaggc cctgtgtctc caggccgagg
3960
ctgggctacc ctcagggaga tccagagact catgcccctg gccatccatg cgtggacgct
4020
gtgtggagag tccaggatga cgggatcccg cacaagctcc cttcagtcct tcagggtgtg
4080
gccatgtggg tgatttttct aaagctggag aaaggaagaa ttgtgccttg catattactt
4140
gagcttaaac tgacaacctg gatgtaaata ggagcctttc tactggttta ttaataaag
4200
ttctatgtgc cagtggcttt tgtggtggat cgccgtgggc ccggtcctta tggagccagc
4260

ctcttcacg acttcctgga ttcctaccag gtcattgttct tcacgctctt cgccctgttg
 4320
 gctgggacag cggatcatgat catagcctac cacactgtct gcagctttat atatgagttg
 4380
 ggcgacatta atatttggtc tgcttctatt tcagggttga gcagctgcag cttctcaaac
 4440
 acctggactt ggatctcatc cgagagttct ctggccaggc catacagctg gc
 4492

<210> 5600

<211> 923

<212> PRT

<213> Homo sapiens

<400> 5600

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Pro | Ala | Pro | Ala | Lys | Ala | Val | Val | Tyr | Val | Ser | Asp | Ile | Gln | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Tyr | Ile | Arg | Val | Val | Asp | Lys | Val | Glu | Ile | Gly | Lys | Thr | Val | Lys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Tyr | Val | Arg | Val | Leu | Asp | Leu | His | Lys | Lys | Pro | Phe | Leu | Ala | Lys |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Tyr | Phe | Pro | Phe | Met | Asp | Leu | Lys | Leu | Arg | Ala | Ala | Ser | Pro | Ile | Ile |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Thr | Leu | Val | Ala | Leu | Asp | Glu | Ala | Leu | Asp | Asn | Tyr | Thr | Ile | Thr | Phe |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Leu | Ile | Arg | Gly | Val | Ala | Ile | Gly | Gln | Thr | Ser | Leu | Thr | Ala | Ser | Val |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Thr | Asn | Lys | Ala | Gly | Gln | Arg | Ile | Asn | Ser | Ala | Pro | Gln | Gln | Ile | Glu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Val | Phe | Pro | Pro | Phe | Arg | Leu | Met | Pro | Arg | Lys | Val | Thr | Leu | Leu | Ile |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Gly | Ala | Thr | Met | Gln | Val | Thr | Ser | Glu | Gly | Gly | Pro | Gln | Pro | Gln | Ser |
| | | | 130 | | | | 135 | | | | 140 | | | | |
| Asn | Ile | Leu | Phe | Ser | Ile | Ser | Asn | Glu | Ser | Val | Ala | Leu | Val | Ser | Ala |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ala | Gly | Leu | Val | Gln | Gly | Leu | Ala | Ile | Gly | Asn | Gly | Thr | Val | Ser | Gly |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Leu | Val | Gln | Ala | Val | Asp | Ala | Glu | Thr | Gly | Lys | Val | Val | Ile | Ile | Ser |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Gln | Asp | Leu | Val | Gln | Val | Glu | Val | Leu | Leu | Leu | Arg | Ala | Val | Arg | Ile |
| | | 195 | | | | | 200 | | | | 205 | | | | |
| Arg | Ala | Pro | Ile | Met | Arg | Met | Arg | Thr | Gly | Thr | Gln | Met | Pro | Ile | Tyr |
| | | 210 | | | | 215 | | | | | 220 | | | | |
| Val | Thr | Gly | Ile | Thr | Asn | His | Gln | Asn | Pro | Phe | Ser | Phe | Gly | Asn | Ala |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Val | Pro | Gly | Leu | Thr | Phe | His | Trp | Ser | Val | Thr | Lys | Arg | Asp | Val | Leu |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Asp | Leu | Arg | Gly | Arg | His | His | Glu | Ala | Ser | Ile | Arg | Leu | Pro | Ser | Gln |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Tyr | Asn | Phe | Ala | Met | Asn | Val | Leu | Gly | Arg | Val | Lys | Gly | Arg | Thr | Gly |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Leu | Arg | Val | Val | Val | Lys | Ala | Val | Asp | Pro | Thr | Ser | Gly | Gln | Leu | Tyr |
| | | 290 | | | | 295 | | | | | 300 | | | | |
| Gly | Leu | Ala | Arg | Glu | Leu | Ser | Asp | Glu | Ile | Gln | Val | Gln | Val | Phe | Glu |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 305 | | | | | 310 | | | | | 315 | | | | 320 | |
| Lys | Leu | Gln | Leu | Leu | Asn | Pro | Glu | Ile | Glu | Ala | Glu | Gln | Ile | Leu | Met |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Ser | Pro | Asn | Ser | Tyr | Ile | Lys | Leu | Gln | Thr | Asn | Arg | Asp | Gly | Ala | Ala |
| | | | | 340 | | | | 345 | | | | | 350 | | |
| Ser | Leu | Ser | Tyr | Arg | Val | Leu | Asp | Gly | Pro | Glu | Lys | Val | Pro | Val | Val |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| His | Val | Asp | Glu | Lys | Gly | Phe | Leu | Ala | Ser | Gly | Ser | Met | Ile | Gly | Thr |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Ser | Thr | Ile | Glu | Val | Ile | Ala | Gln | Glu | Pro | Phe | Gly | Ala | Asn | Gln | Thr |
| 385 | | | | | 390 | | | | | 395 | | | | 400 | |
| Ile | Ile | Val | Ala | Val | Lys | Val | Ser | Pro | Val | Ser | Tyr | Leu | Arg | Val | Ser |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Met | Ser | Pro | Val | Leu | His | Thr | Gln | Asn | Lys | Glu | Ala | Leu | Val | Ala | Val |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Pro | Leu | Gly | Met | Thr | Val | Thr | Phe | Thr | Val | His | Phe | His | Asp | Asn | Ser |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Gly | Asp | Val | Phe | His | Ala | His | Ser | Ser | Val | Leu | Asn | Phe | Ala | Thr | Asn |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Arg | Asp | Asp | Phe | Val | Gln | Ile | Gly | Lys | Gly | Pro | Thr | Asn | Asn | Thr | Cys |
| 465 | | | | | 470 | | | | | 475 | | | | 480 | |
| Val | Val | Arg | Thr | Val | Ser | Val | Gly | Leu | Thr | Leu | Leu | Arg | Val | Trp | Asp |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Ala | Glu | His | Pro | Gly | Leu | Ser | Asp | Phe | Met | Pro | Leu | Pro | Val | Leu | Gln |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Ala | Ile | Ser | Pro | Glu | Leu | Ser | Gly | Ala | Met | Val | Val | Gly | Asp | Val | Leu |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Cys | Leu | Ala | Thr | Val | Leu | Thr | Ser | Leu | Glu | Gly | Leu | Ser | Gly | Thr | Trp |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Ser | Ser | Ser | Ala | Asn | Ser | Ile | Leu | His | Ile | Asp | Pro | Lys | Thr | Gly | Val |
| 545 | | | | 550 | | | | | | 555 | | | | 560 | |
| Ala | Val | Ala | Arg | Ala | Val | Gly | Ser | Val | Thr | Val | Tyr | Tyr | Glu | Val | Ala |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Gly | His | Leu | Arg | Thr | Tyr | Lys | Glu | Val | Val | Val | Ser | Val | Pro | Gln | Arg |
| | | | 580 | | | | 585 | | | | | 590 | | | |
| Ile | Met | Ala | Arg | His | Leu | His | Pro | Ile | Gln | Thr | Ser | Phe | Gln | Glu | Ala |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Thr | Ala | Ser | Lys | Val | Ile | Val | Ala | Val | Gly | Asp | Arg | Ser | Ser | Asn | Leu |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Arg | Gly | Glu | Cys | Thr | Pro | Thr | Gln | Arg | Glu | Val | Ile | Gln | Ala | Leu | His |
| 625 | | | | | 630 | | | | | 635 | | | | 640 | |
| Pro | Glu | Thr | Leu | Ile | Ser | Cys | Gln | Ser | Gln | Phe | Lys | Pro | Ala | Val | Phe |
| | | | | 645 | | | | | 650 | | | | | 655 | |
| Asp | Phe | Pro | Ser | Gln | Asp | Val | Phe | Thr | Val | Glu | Pro | Gln | Phe | Asp | Thr |
| | | | 660 | | | | 665 | | | | | 670 | | | |
| Ala | Leu | Gly | Gln | Tyr | Phe | Cys | Ser | Ile | Thr | Met | His | Arg | Leu | Thr | Asp |
| | | 675 | | | | | 680 | | | | | 685 | | | |
| Lys | Gln | Arg | Lys | His | Leu | Ser | Met | Lys | Lys | Thr | Ala | Leu | Val | Val | Ser |
| | 690 | | | | | 695 | | | | | 700 | | | | |
| Ala | Ser | Leu | Ser | Ser | Ser | His | Phe | Ser | Thr | Glu | Gln | Val | Gly | Ala | Glu |
| 705 | | | | | 710 | | | | | 715 | | | | 720 | |
| Val | Pro | Phe | Ser | Pro | Gly | Leu | Phe | Ala | Asp | Gln | Ala | Glu | Ile | Leu | Leu |
| | | | | 725 | | | | | 730 | | | | | 735 | |
| Ser | Asn | His | Tyr | Thr | Ser | Ser | Glu | Ile | Arg | Val | Phe | Gly | Ala | Pro | Glu |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | | | 740 | | | | | 745 | | | | | 750 | | |
| Val | Leu | Glu | Asn | Leu | Glu | Val | Lys | Ser | Gly | Ser | Pro | Ala | Val | Leu | Ala | |
| | | 755 | | | | | 760 | | | | | 765 | | | | |
| Phe | Ala | Lys | Glu | Lys | Ser | Phe | Gly | Trp | Pro | Ser | Phe | Ile | Thr | Tyr | Thr | |
| | 770 | | | | | 775 | | | | | 780 | | | | | |
| Val | Gly | Val | Ser | Asp | Pro | Ala | Ala | Gly | Ser | Gln | Gly | Pro | Leu | Ser | Thr | |
| 785 | | | | | 790 | | | | | 795 | | | | | 800 | |
| Thr | Leu | Thr | Phe | Ser | Ser | Pro | Val | Thr | Asn | Gln | Ala | Ile | Ala | Ile | Pro | |
| | | | | 805 | | | | | 810 | | | | | 815 | | |
| Val | Thr | Val | Ala | Phe | Val | Met | Asp | Arg | Arg | Gly | Pro | Gly | Pro | Tyr | Gly | |
| | | | 820 | | | | | 825 | | | | | 830 | | | |
| Ala | Ser | Leu | Phe | Gln | His | Phe | Leu | Asp | Ser | Tyr | Gln | Val | Met | Phe | Phe | |
| | | 835 | | | | | 840 | | | | | 845 | | | | |
| Thr | Leu | Phe | Ala | Leu | Leu | Ala | Gly | Thr | Ala | Val | Met | Ile | Ile | Ala | Tyr | |
| | 850 | | | | | 855 | | | | | 860 | | | | | |
| His | Thr | Val | Cys | Thr | Pro | Arg | Asp | Leu | Ala | Val | Pro | Ala | Ala | Leu | Thr | |
| 865 | | | | | 870 | | | | | | 875 | | | | 880 | |
| Pro | Arg | Ala | Ser | Pro | Gly | His | Ser | Pro | His | Tyr | Phe | Ala | Ala | Ser | Ser | |
| | | | | 885 | | | | | 890 | | | | | 895 | | |
| Pro | Thr | Ser | Pro | Asn | Ala | Leu | Pro | Pro | Ala | Arg | Lys | Ala | Ser | Pro | Pro | |
| | | | 900 | | | | | 905 | | | | | 910 | | | |
| Ser | Gly | Leu | Trp | Ser | Pro | Ala | Tyr | Ala | Ser | His | | | | | | |
| | | 915 | | | | | 920 | | | | | | | | | |

```
<210> 5601
<211> 670
<212> DNA
<213> Homo sapiens
```

```

<400> 5601
ggccgtaact gctgccatct tctccgcgct atggctgcgt tcggccgtca ggtccttgat
60
tggcacccgcc tgatccccct cacctgggcc tgtatggcta ggcagactcg tcatcttgga
120
gaacagagaa ggacgacagc ttctttgttg cgaaaactga ctacagcctc caatggaggg
180
gtcattgagg agttatcttg tgtagatcc aataactatg tgcaggaacc agagtgcagg
240
aggaatcttg ttcagtgcct ccttgagaag caggggactc ctgtggtaca agggtccttg
300
gagctagaga gggtcatgag ttccctcctg gacatgggtt tcagcaatgc ccatattaat
360
gaattgctca gtgtacggcg aggtgccagt cttcaacagt tgctggacat catttcagaa
420
tttattctct tgggtctgaa tccagagcct gtgtgtgtgg tcttgaagaa aagtccccag
480
ttattgaaac tgcctattat gcaaatgagg aagcgctcca gttacctgca aaagcttggg
540
cttggagaag ggaaattaaa gagggtgctt tactgttgcc ctgaaatddd caccatgcgc
600
cagcaggaca ttaacgacac tgtcaggctt ctcaaggaga agtgcctddd cacgggtacc
660
cttcacgcgt
670

```

<210> 5602
 <211> 213
 <212> PRT
 <213> Homo sapiens

<400> 5602
 Met Ala Ala Phe Gly Arg Gln Val Leu Asp Trp His Arg Leu Ile Pro
 1 5 10 15
 Leu Thr Trp Ala Cys Met Ala Arg Gln Thr Arg His Leu Gly Glu Gln
 20 25 30
 Arg Arg Thr Thr Ala Ser Leu Leu Arg Lys Leu Thr Thr Ala Ser Asn
 35 40 45
 Gly Gly Val Ile Glu Glu Leu Ser Cys Val Arg Ser Asn Asn Tyr Val
 50 55 60
 Gln Glu Pro Glu Cys Arg Arg Asn Leu Val Gln Cys Leu Leu Glu Lys
 65 70 75 80
 Gln Gly Thr Pro Val Val Gln Gly Ser Leu Glu Leu Glu Arg Val Met
 85 90 95
 Ser Ser Leu Leu Asp Met Gly Phe Ser Asn Ala His Ile Asn Glu Leu
 100 105 110
 Leu Ser Val Arg Arg Gly Ala Ser Leu Gln Gln Leu Leu Asp Ile Ile
 115 120 125
 Ser Glu Phe Ile Leu Leu Gly Leu Asn Pro Glu Pro Val Cys Val Val
 130 135 140
 Leu Lys Lys Ser Pro Gln Leu Leu Lys Leu Pro Ile Met Gln Met Arg
 145 150 155 160
 Lys Arg Ser Ser Tyr Leu Gln Lys Leu Gly Leu Gly Glu Gly Lys Leu
 165 170 175
 Lys Arg Val Leu Tyr Cys Cys Pro Glu Ile Phe Thr Met Arg Gln Gln
 180 185 190
 Asp Ile Asn Asp Thr Val Arg Leu Leu Lys Glu Lys Cys Leu Phe Thr
 195 200 205
 Val Pro Leu His Ala
 210

<210> 5603
 <211> 2070
 <212> DNA
 <213> Homo sapiens

<400> 5603
 ngcttctagg ccttctcagt agatggagct aagtaatatata tgtatatata ctaaccacaca
 60
 gatataaata tgtctataat tatttctata tttatccatt cgtgtatatg ttaagataaa
 120
 catgatggag acccttcaaa ttgcttatg ttctttttca gcctatagac cagatataat
 180
 aattagcttt tcttctcttg cagattccag agagtcctct atttcatatg tgccttccag
 240
 aacatctctt gtggatttca ctacttggct tctgtgttca tgggagtcac cctcatcat
 300
 gtctgcaggc cccagggcaa tgtgagtcag gttgttttcc ataatcactc taattggagt
 360

ttggaggaca ccggggccct gttgtcttca ggccagaaag attatgttac ggtgcagttg
420
cagaatggtg agatctggga gctctcaagg tgtagcagga ataagaggga gaacacatcg
480
agtttgggct atgaatacac tggcagtaag aaagagtttc cttgtgtgga tggctacata
540
tatgaccaga acacatggaa aagcactgcg gtgacccagt ggaacctggt ctgtgaccga
600
aaatggcttg caatgctgat ccagccccta tttatgtttg gagtcctact gggatcggtg
660
acttttggct acttttctga caggctagga cgccgggtgg tcttgtgggc cacaagcagt
720
agcatgtttt tgtttggaat agcagcggcg tttgcagttg attattacac cttcatggct
780
gctcgctttt ttcttgccat ggttgcaagt ggctatcttg tgggtggggtt tgtctatgtg
840
atggaattca ttggcatgaa gtctcggaca tgggcgtctg tccatttgca ttcctttttt
900
gcagttggaa ccctgctggt ggctttgaca ggatacttg tcaggacctg gtggctttac
960
cagatgatcc tctccacagt gactgtcccc tttatcctgt gctgttgggt gctcccagag
1020
acaccttttt ggcttctctc agagggacga tatgaagaag cacaaaaaat agttgacatc
1080
atggccaagt ggaacagggc aagctcctgt aaactgtcag aacttttatc actggaccta
1140
caaggctctg ttagtaatag cccactgaa gttcagaagc acaacctatc atatctgttt
1200
tataactgga gcattacgaa aaggacactt accgtttggc taatctgggt cactggaagt
1260
ttgggattct actcgttttc cttgaattct gttaacttag gaggcaatga atacttaaac
1320
ctcttctccc tgggtgtagt ggaaattccc gcctacacct tcgtgtgcat cgccatggac
1380
aaggtcggga ggagaacagt cctggcctac tctcttttct gcagtgcact ggctgtggt
1440
gtcgttatgg tgatccccca gaaacattat attttgggtg tggtgacagc tatggttgga
1500
aaatttgcca tcggggcagc atttggcctc atttatcttt atacagctga gctgtatcca
1560
accattgtaa gatcgctggc tgtgggaagc ggcagcatgg tgtgtgcct ggccagcatc
1620
ctggcgccgt tctctgtgga cctcagcagc atttggatct tcataccaca gttgtttgtt
1680
gggactatgg ccctcctgag tggagtgtta acactaaagc ttccagaaac ccttgggaaa
1740
cggctagcaa ctacttggga ggaggctgca aaactggagt cagagaaatga aagcaagtca
1800
agcaaattac ttctcacaac taataatagt gggctggaaa aaacggaagc gattaccccc
1860
agggattctg gtcttgggtg ataaatgtgc catgcctgct gtctagcacc tgaaatatta
1920
tttaccctaa tgcctttgta ttagaggaat cttattctca tctcccatat gttgtttgta
1980

tgtcttttta ataaattttg taagaaaatt ttaaagcaaa tatgttataa aagaaataaa
 2040
 aactaagatg aaaatttctca gttttaaaaa
 2070

<210> 5604
 <211> 560
 <212> PRT
 <213> Homo sapiens

<400> 5604

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Phe | Gln | Arg | Val | Leu | Tyr | Phe | Ile | Cys | Ala | Phe | Gln | Asn | Ile | Ser | 1 | 5 | 10 | 15 |
| Cys | Gly | Ile | His | Tyr | Leu | Ala | Ser | Val | Phe | Met | Gly | Val | Thr | Pro | His | 20 | 25 | 30 | |
| His | Val | Cys | Arg | Pro | Pro | Gly | Asn | Val | Ser | Gln | Val | Val | Phe | His | Asn | 35 | 40 | 45 | |
| His | Ser | Asn | Trp | Ser | Leu | Glu | Asp | Thr | Gly | Ala | Leu | Leu | Ser | Ser | Gly | 50 | 55 | 60 | |
| Gln | Lys | Asp | Tyr | Val | Thr | Val | Gln | Leu | Gln | Asn | Gly | Glu | Ile | Trp | Glu | 65 | 70 | 75 | 80 |
| Leu | Ser | Arg | Cys | Ser | Arg | Asn | Lys | Arg | Glu | Asn | Thr | Ser | Ser | Leu | Gly | 85 | 90 | 95 | |
| Tyr | Glu | Tyr | Thr | Gly | Ser | Lys | Lys | Glu | Phe | Pro | Cys | Val | Asp | Gly | Tyr | 100 | 105 | 110 | |
| Ile | Tyr | Asp | Gln | Asn | Thr | Trp | Lys | Ser | Thr | Ala | Val | Thr | Gln | Trp | Asn | 115 | 120 | 125 | |
| Leu | Val | Cys | Asp | Arg | Lys | Trp | Leu | Ala | Met | Leu | Ile | Gln | Pro | Leu | Phe | 130 | 135 | 140 | |
| Met | Phe | Gly | Val | Leu | Leu | Gly | Ser | Val | Thr | Phe | Gly | Tyr | Phe | Ser | Asp | 145 | 150 | 155 | 160 |
| Arg | Leu | Gly | Arg | Arg | Val | Val | Leu | Trp | Ala | Thr | Ser | Ser | Ser | Met | Phe | 165 | 170 | 175 | |
| Leu | Phe | Gly | Ile | Ala | Ala | Ala | Phe | Ala | Val | Asp | Tyr | Tyr | Thr | Phe | Met | 180 | 185 | 190 | |
| Ala | Ala | Arg | Phe | Phe | Leu | Ala | Met | Val | Ala | Ser | Gly | Tyr | Leu | Val | Val | 195 | 200 | 205 | |
| Gly | Phe | Val | Tyr | Val | Met | Glu | Phe | Ile | Gly | Met | Lys | Ser | Arg | Thr | Trp | 210 | 215 | 220 | |
| Ala | Ser | Val | His | Leu | His | Ser | Phe | Phe | Ala | Val | Gly | Thr | Leu | Leu | Val | 225 | 230 | 235 | 240 |
| Ala | Leu | Thr | Gly | Tyr | Leu | Val | Arg | Thr | Trp | Trp | Leu | Tyr | Gln | Met | Ile | 245 | 250 | 255 | |
| Leu | Ser | Thr | Val | Thr | Val | Pro | Phe | Ile | Leu | Cys | Cys | Trp | Val | Leu | Pro | 260 | 265 | 270 | |
| Glu | Thr | Pro | Phe | Trp | Leu | Leu | Ser | Glu | Gly | Arg | Tyr | Glu | Glu | Ala | Gln | 275 | 280 | 285 | |
| Lys | Ile | Val | Asp | Ile | Met | Ala | Lys | Trp | Asn | Arg | Ala | Ser | Ser | Cys | Lys | 290 | 295 | 300 | |
| Leu | Ser | Glu | Leu | Leu | Ser | Leu | Asp | Leu | Gln | Gly | Pro | Val | Ser | Asn | Ser | 305 | 310 | 315 | 320 |
| Pro | Thr | Glu | Val | Gln | Lys | His | Asn | Leu | Ser | Tyr | Leu | Phe | Tyr | Asn | Trp | 325 | 330 | 335 | |
| Ser | Ile | Thr | Lys | Arg | Thr | Leu | Thr | Val | Trp | Leu | Ile | Trp | Phe | Thr | Gly | | | | |

```
<210> 5605
<211> 376
<212> DNA
<213> Homo sapiens
```

```
<210> 5606
<211> 101
<212> PRT
<213> Homo sapiens
```

<400> 5606

```

Met Thr Arg Ala Leu Leu Thr Ser Leu Val Leu Leu Pro Ala Arg Gln
 1           5           10           15
Ala His Pro Cys Arg Ala Leu Ala Leu Thr Ala Pro Ile Phe Leu Leu
 20           25           30
Leu Phe Pro Ser Ser Glu Cys Gly Trp Phe Ser Leu Leu Leu Ser Ser
 35           40           45
Asp Val Pro Ser Ser Ser Leu Glu Arg Pro Pro Trp Met Thr Glu Glu
 50           55           60
Val Thr Thr Thr Ser Ser Arg Ser Thr Pro Arg Pro Ser Val Ser Pro
 65           70           75           80
Ser Gln Cys Leu Ala Pro Ser Asn Ile Ala Phe Cys Val Tyr His Gln
 85           90           95
Phe Pro Phe Thr Arg
          100

```

<210> 5607

<211> 320

<212> DNA

<213> Homo sapiens

<400> 5607

```

gtgcacacgc gaggtatagg ctccagactc ctcaccaaga tgggctatga gtttggcaag
60
ggtttggggcc gacacgcgga aggccgggtg gagcccatcc atgctgtggt gttgcctcga
120
gggaagtgcg tggaccagtg tgtggagacc ctgcagaagc agaccagggg tggcaaggct
180
ggcaccaaca agccccccag gtgccgggga agagggggcca ggcctggggg cgcgccagct
240
cctcggaatg tgtttgactt cctcaatgaa aagctgcaag gtcaggctcc tggggcccta
300
caagccgggc ggcctcagca
320

```

<210> 5608

<211> 106

<212> PRT

<213> Homo sapiens

<400> 5608

```

Val His Thr Arg Gly Ile Gly Ser Arg Leu Leu Thr Lys Met Gly Tyr
 1           5           10           15
Glu Phe Gly Lys Gly Leu Gly Arg His Ala Glu Gly Arg Val Glu Pro
 20           25           30
Ile His Ala Val Val Leu Pro Arg Gly Lys Ser Leu Asp Gln Cys Val
 35           40           45
Glu Thr Leu Gln Lys Gln Thr Arg Val Gly Lys Ala Gly Thr Asn Lys
 50           55           60
Pro Pro Arg Cys Arg Gly Arg Gly Ala Arg Pro Gly Gly Arg Pro Ala
 65           70           75           80
Pro Arg Asn Val Phe Asp Phe Leu Asn Glu Lys Leu Gln Gly Gln Ala
 85           90           95
Pro Gly Ala Leu Gln Ala Gly Arg Pro Gln

```


100

105

<210> 5609

<211> 1843

<212> DNA

<213> Homo sapiens

<400> 5609

```

tttttttttt tttttttttc aagcaatttt ttccctttat tatttttggt aaataagatt
60
ccagaaagta tagtgcaaac actcagtaga aaagttgcaa ttaagaaatg tacattcaca
120
tttaacattt cagtccattc acttttttta aaataaaaaat aggacaaatt attcaattac
180
ttgtctcaat ttaacaatct tgaaaaagac tggaaggtag cctacagtgt tcagttgaca
240
taaaaaataga ccggtattga tcatacaaat ctatcatgag aagttaccca gtgagagtga
300
gttattgtaa ttctgaatgt actcatcgtg tttctcactt ctacagaagc atcctcagtg
360
agttgtattg tgcgagaaaa tgacaccctt gccacatca ctctccattc catagaggga
420
cacaacccta tctagccaaa ccagaagaa cgcaggcgct tacacaactt ttctcggaca
480
gtcgagaaaa tccaaaagtg ggctttgggc ttaccttaaa taggaatgga atgtaccact
540
acgagatggg catcataata aggacattgt tgtttgagcg gggggtgtgc aatcagtata
600
aatgaggatg gcggagggaag aggagtggg actgaaggga ggtgggtgcat aataagtga
660
cgagctacac aaagctcgag ctacacaaag ctcaggctcc acgggcctcg ccttggtcc
720
cagggatgct ctgcagccag cgggcggatg acctgagggtc gggcctgggc ctgtcccttt
780
gtgcatgcgg cgtgatttca aattcaaact aagttccaca ccattaggag ttttcacggc
840
atgcagttcc agagtgc aaa tggttgcat atgtgcagtt ttacaggtg gaaggcaaga
900
ccatacatct ctcccacact gggcgtgcct cctagtggac agttgtatgc aagaggcggg
960
gatgggctcc ctcaggatcc cccaatgtgg gaatgggtccc ctgagacttg tgcttcgtgt
1020
gcctggggcc cagagttggg tgggggggtg ctgggtgggag gtgagaaaca agttctggct
1080
gccgtcgggc cagcttccca ctgccctcac ctgggaggtg gatgccaca ggcaggatgc
1140
tctgggctac tgttgcacag tcctgcacga gatatttatt cagcccacaa gatttaatat
1200
atctcttggg agttcatcta ggctattatg tctgtttaaa cattaattct caataagtgc
1260
ctgaaagctc ttttgaaagc aacctatttg aaggtctgaa ccgcccggta ccagcaggaa
1320
ccaatgcca ggagagggtc agagcacatg tgctctgggtg gttgtcaa atctcaccat
1380

```

ccatcataag ccctctgaac tctgtctgaa atcggccctt tgaacatcct ctaaccctg
 1440
 ggaaggcacc cggaccacc tttacctcac cagcagcata tgacaataac attaatggc
 1500
 tctacagcag aggaagatga aagtaaaagt agcaaataca accaatggcc ttcccatagc
 1560
 tcacagaact cctgagcaga agctgagcag ggaagaaatg gtgtgtagtt tcagggtgtc
 1620
 tggagggtgcc accatttctc cccatttgat gtcagagagg ctttacaaaa aaataaggca
 1680
 acagctctta aggagattct gtatatattga aattagacgc aatgacaggt ttcgctccca
 1740
 aantatagtt ttagaatata gtctgatatg acaaagtagg gattttttaa gcctaacatt
 1800
 ttatttcctt gctggggatc agttagtaaa gaaggaggaa ttc
 1843

<210> 5610

<211> 153

<212> PRT

<213> Homo sapiens

<400> 5610

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Arg | Asp | Phe | Lys | Phe | Lys | Leu | Ser | Ser | Thr | Pro | Leu | Gly | Val |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Phe | Thr | Ala | Cys | Ser | Ser | Arg | Val | Gln | Met | Ala | Cys | Ile | Cys | Ala | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Phe | Thr | Gly | Gly | Arg | Gln | Asp | His | Thr | Ser | Leu | Pro | His | Trp | Ala | Cys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Leu | Val | Asp | Ser | Cys | Met | Gln | Glu | Ala | Val | Met | Gly | Ser | Leu | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ile | Pro | Gln | Cys | Gly | Asn | Gly | Pro | Leu | Arg | Leu | Val | Leu | Arg | Val | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Gly | Ala | Gln | Ser | Trp | Val | Gly | Gly | Cys | Trp | Trp | Glu | Val | Arg | Asn | Lys |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Phe | Trp | Leu | Pro | Ser | Gly | Gln | Leu | Pro | Thr | Ala | Leu | Thr | Trp | Glu | Val |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Asp | Ala | His | Arg | Gln | Asp | Ala | Leu | Gly | Tyr | Cys | Cys | Thr | Val | Leu | His |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Glu | Ile | Phe | Ile | Gln | Pro | Thr | Arg | Phe | Asn | Arg | Ser | Leu | Gly | Ser | Ser |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ser | Arg | Leu | Leu | Cys | Leu | Phe | Lys | His | | | | | | | |
| 145 | | | | | 150 | | | | | | | | | | |

<210> 5611

<211> 1152

<212> DNA

<213> Homo sapiens

<400> 5611

ngggccgctc cctcccggac tcccggcctc ccggcctccc tgggtcccgc tgggaagggg
 60
 tgcaaggaag ccctccggcg ctgcgctccg aggcgggaga cagcgcccc ctcgccccct
 120

cggttcctgg cgcctcagag cccggcccag gccgcggaac ggtgatgctc gggccggacg
 180
 ggcgagcgcg gatccctgcg tcccgtgaa aatgtgtgtc tgacatgcaa gctcagtggg
 240
 gcagagaccc gtggattgct gtgccctgcc ctccggacct ggatcatgaa ggtgttggga
 300
 agaagcttct tctgggtgct gtttcccgtc cttccctggg cgggtgcaggc tgtggagcac
 360
 gaggaggtgg cgcagcgtgt gatcaaatg caccgcgggc gaggggtggc tgccatgcag
 420
 agccggcagt ggggtccggga cagctgcagg aagctctcag ggcttctccg ccagaagaat
 480
 gcagttctga acaaaactgaa aactgcaatt ggagcagtgg agaaagacgt gggcctgtcg
 540
 gatgaagaga aactgtttca ggtgcacacg tttgaaattt tccagaaaga gctgaatgaa
 600
 agtgaataatt ccgttttcca agctgtctac ggactgcaga gagccctgca gggggattac
 660
 aaagatgtcg tgaacatgaa ggagagcagc cggcagcgcc tggaggccct gagagaggct
 720
 gcaataaagg aagaaacaga atatatggaa cttctggcag cagaaaaaca tcaagttgaa
 780
 gcccttaaaa atatgcaaca tcaaaaccaa agtttatcca tgcttgacga gattcttgaa
 840
 gatgtaagaa aggcagcggg tcgtctggag gaagagatag aggaacatgc ttttgacgac
 900
 aataaatcag tcaagggggg caattttgag gcagttctga ggggtggagga agaagaggcc
 960
 aattctaagc aaaatataac aaaacgagaa gtggaggatg acttggttct tagcatgctg
 1020
 attgactccc agaacaacca gtatatatttg accaagccca gagattcaac catcccacgt
 1080
 gcagatcacc actttataaa ggacattggt accataggaa tgctgtcttt gccttgtggc
 1140
 tggcgatgta ca
 1152

<210> 5612

<211> 289

<212> PRT

<213> Homo sapiens

<400> 5612

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Val | Leu | Gly | Arg | Ser | Phe | Phe | Trp | Val | Leu | Phe | Pro | Val | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Trp | Ala | Val | Gln | Ala | Val | Glu | His | Glu | Glu | Val | Ala | Gln | Arg | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ile | Lys | Leu | His | Arg | Gly | Arg | Gly | Val | Ala | Ala | Met | Gln | Ser | Arg | Gln |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Trp | Val | Arg | Asp | Ser | Cys | Arg | Lys | Leu | Ser | Gly | Leu | Leu | Arg | Gln | Lys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Asn | Ala | Val | Leu | Asn | Lys | Leu | Lys | Thr | Ala | Ile | Gly | Ala | Val | Glu | Lys |
| 65 | | | | 70 | | | | | | 75 | | | | 80 | |
| Asp | Val | Gly | Leu | Ser | Asp | Glu | Glu | Lys | Leu | Phe | Gln | Val | His | Thr | Phe |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| | | | 85 | | | | | 90 | | | | | 95 | | | | |
| Glu | Ile | Phe | Gln | Lys | Glu | Leu | Asn | Glu | Ser | Glu | Asn | Ser | Val | Phe | Gln | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | |
| Ala | Val | Tyr | Gly | Leu | Gln | Arg | Ala | Leu | Gln | Gly | Asp | Tyr | Lys | Asp | Val | | |
| | | | 115 | | | | | 120 | | | | | 125 | | | | |
| Val | Asn | Met | Lys | Glu | Ser | Ser | Arg | Gln | Arg | Leu | Glu | Ala | Leu | Arg | Glu | | |
| | | | 130 | | | | | 135 | | | | | 140 | | | | |
| Ala | Ala | Ile | Lys | Glu | Glu | Thr | Glu | Tyr | Met | Glu | Leu | Leu | Ala | Ala | Glu | | |
| 145 | | | 150 | | | | | 155 | | | | | 160 | | | | |
| Lys | His | Gln | Val | Glu | Ala | Leu | Lys | Asn | Met | Gln | His | Gln | Asn | Gln | Ser | | |
| | | | 165 | | | | | 170 | | | | | 175 | | | | |
| Leu | Ser | Met | Leu | Asp | Glu | Ile | Leu | Glu | Asp | Val | Arg | Lys | Ala | Ala | Asp | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | |
| Arg | Leu | Glu | Glu | Glu | Ile | Glu | Glu | His | Ala | Phe | Asp | Asp | Asn | Lys | Ser | | |
| | | | 195 | | | | | 200 | | | | | 205 | | | | |
| Val | Lys | Gly | Val | Asn | Phe | Glu | Ala | Val | Leu | Arg | Val | Glu | Glu | Glu | Glu | | |
| | | | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Asn | Ser | Lys | Gln | Asn | Ile | Thr | Lys | Arg | Glu | Val | Glu | Asp | Asp | Leu | | |
| 225 | | | 230 | | | | | 235 | | | | | 240 | | | | |
| Val | Leu | Ser | Met | Leu | Ile | Asp | Ser | Gln | Asn | Gln | Tyr | Ile | Leu | Thr | | | |
| | | | 245 | | | | | 250 | | | | | 255 | | | | |
| Lys | Pro | Arg | Asp | Ser | Thr | Ile | Pro | Arg | Ala | Asp | His | His | Phe | Ile | Lys | | |
| | | | 260 | | | | | 265 | | | | | 270 | | | | |
| Asp | Ile | Val | Thr | Ile | Gly | Met | Leu | Ser | Leu | Pro | Cys | Gly | Trp | Arg | Cys | | |
| | | | 275 | | | | | 280 | | | | | 285 | | | | |
| Thr | | | | | | | | | | | | | | | | | |

```
<210> 5613
<211> 1679
<212> DNA
<213> Homo sapiens
```

<400> 5613

ggctaaggct gcatcccagg tgagttcccc cccccgtac cccggagggt ttgttggtga
60

gggttccggg gagcggcctg gagagagggt gaggcgaagt ctagtttcgc ttcagggagg
120

ctcagaccct gtgggggtcaa gtcggcggtg gaggccctag gctcagcctg tggggaccgg
180

cggggactcg gcctgggcag tcctgggaga agctgagccg gctctgcctg aagccagttc
240

tccttgctgc aggtgctggt ggacagcgcg gaggaggggt ccctcgctgc ggcggcggag
300

ctggccgctc agaagcgcg agaagactg cgcaaattcc gggagctgca cctgatgcgg
360

aatgaagctc gtaaattaaa tcaccaggaa gttgtggaag aagataaaaag actaaaatta
420

cctgcaaatt gggaagccaa aaaagctcgt ttggagtggg aactaaagga agaggaaaaag
480

aaaaaggaat gtgcggcaag aggagaagac tatgagaaaag tgaagttgct ggagatcagt
540

gcagaagatg cagaaagatg ggagaggaaa aagaagagga aaaaccctga tctgggattt
600

tcagattatg ctgctgccca gttacgccag tatcatcggt tgaccaagca gatcaaacct
 660
 gacatggaaa catatgagag actgagagaa aaacatggag aagagttttt cccaacatcc
 720
 aatagtcttc ttcattggaac acatgtgcct tccacagagg aaattgacag gatggtcata
 780
 gatctggaaa aacagattga aaaacgagac aaatatagcc ggagacgtcc ttataatgat
 840
 gatgcagata tcgactacat taatgaaagg aatgccaaat tcaacaagaa agctgaaaga
 900
 ttctatggga aatacacagc tgaaattaaa cagaatttgg aaagaggaac agctgtctaa
 960
 tcccttcaag aactgtttat agaagcttga gaatggggta aaaatttctg ctagcaaaat
 1020
 caagttcttt ttgaaatttt atcagtaatc cagaatttag tagtccatgc cttctcactc
 1080
 agcatttaga aataaaaatg tggtttctta aacgtatatc ctttcatgta tatttccaca
 1140
 tttttgtgct tggatataag atgtatttct tgtagtgaag ttgttttgta atctactttg
 1200
 tatacattct aattatatta tttttctatg tattttaaat gtatatggct gtttaattct
 1260
 tgaagcattt tgggcttaag attgccagca gcacacatca gatgcagtc tttgtgctat
 1320
 cagtgtggaa tttgatagag tctagactcg ggccacttgg agttgtgtac tccaaagcta
 1380
 aggacagtga tgaggaagat ggcagtggcc accggaggac tggagcagtc cctcctcatg
 1440
 gcggcctgtg accaaggctg gggaggagtg gagctatcct tccatgatct gatcatgtac
 1500
 ttcggagaga ggctggagtg tgctaccgac gtccaatatc catgcagtcg gtttagaggct
 1560
 ggagtgtgct accgacgtcg aatatccatg cagactagaa aaccattat ctcagcccaa
 1620
 aatctcctta agctgataag caacttcagc aaagtctcag catacaaaat caatgtaca
 1679

<210> 5614

<211> 242

<212> PRT

<213> Homo sapiens

<400> 5614

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gln | Phe | Ser | Leu | Ser | Gln | Val | Leu | Val | Asp | Ser | Ala | Glu | Glu | Gly |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Ser | Leu | Ala | Ala | Ala | Ala | Glu | Leu | Ala | Ala | Gln | Lys | Arg | Glu | Gln | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Arg | Lys | Phe | Arg | Glu | Leu | His | Leu | Met | Arg | Asn | Glu | Ala | Arg | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Asn | His | Gln | Glu | Val | Val | Glu | Glu | Asp | Lys | Arg | Leu | Lys | Leu | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ala | Asn | Trp | Glu | Ala | Lys | Lys | Ala | Arg | Leu | Glu | Trp | Glu | Leu | Lys | Glu |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Glu | Glu | Lys | Lys | Lys | Glu | Cys | Ala | Ala | Arg | Gly | Glu | Asp | Tyr | Glu | Lys |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 85 | | 90 | | 95 | | | | | | | | | | |
| Val | Lys | Leu | Leu | Glu | Ile | Ser | Ala | Glu | Asp | Ala | Glu | Arg | Trp | Glu | Arg |
| | 100 | | | 105 | | | | | | | | | 110 | | |
| Lys | Lys | Lys | Arg | Lys | Asn | Pro | Asp | Leu | Gly | Phe | Ser | Asp | Tyr | Ala | Ala |
| | 115 | | | | 120 | | | | | | | 125 | | | |
| Ala | Gln | Leu | Arg | Gln | Tyr | His | Arg | Leu | Thr | Lys | Gln | Ile | Lys | Pro | Asp |
| | 130 | | | | 135 | | | | | | 140 | | | | |
| Met | Glu | Thr | Tyr | Glu | Arg | Leu | Arg | Glu | Lys | His | Gly | Glu | Glu | Phe | Phe |
| 145 | | | | 150 | | | | | | 155 | | | | | 160 |
| Pro | Thr | Ser | Asn | Ser | Leu | Leu | His | Gly | Thr | His | Val | Pro | Ser | Thr | Glu |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Glu | Ile | Asp | Arg | Met | Val | Ile | Asp | Leu | Glu | Lys | Gln | Ile | Glu | Lys | Arg |
| | 180 | | | | | | | 185 | | | | | 190 | | |
| Asp | Lys | Tyr | Ser | Arg | Arg | Arg | Pro | Tyr | Asn | Asp | Asp | Ala | Asp | Ile | Asp |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| Tyr | Ile | Asn | Glu | Arg | Asn | Ala | Lys | Phe | Asn | Lys | Lys | Ala | Glu | Arg | Phe |
| | 210 | | | | 215 | | | | | | 220 | | | | |
| Tyr | Gly | Lys | Tyr | Thr | Ala | Glu | Ile | Lys | Gln | Asn | Leu | Glu | Arg | Gly | Thr |
| 225 | | | | 230 | | | | | 235 | | | | | 240 | |
| Ala | Val | | | | | | | | | | | | | | |

<210> 5615

<211> 1522

<212> DNA

<213> Homo sapiens

<400> 5615

ccggctgtat tatctggcta tttcaaacag tttcagaagt ctttacctcc acgattccag

60

cggcagcagg aacagatgaa acagcagcag tggcagcagc agcaacagca aggtgtactt

120

ccacagactg ttccttcaca accgtccagt agtactgtcc ctccctccacc acacagacct

180

ctttatcagc ctatgcagcc tcctcctcag cattttggctt ctatggggttt tgatccaagg

240

tggctcatga tgcagtccta catggatcct cgaatgatgt caggaagacc tgctatggat

300

attccaccca ttcctcctgg aatgattcct cctaaaccat taatgagaag agaccagatg

360

gaagggtcac cgaacagttc tgagtcattt gagcatatag ctcgatctgc aagagatcac

420

gcaatttccc tttctgagcc tcgtatgctg tggggggtcag atccctatcc tcatgctgag

480

cctcaacaag caactactcc caaagcaaca gaagagcctg aggatgtaag gtctgaagct

540

gcgttggacc aggaacagat tactgctgct tattctgtag aacataatca attagaggct

600

cacccaaagg cagactttat cagagaatca agtgaggcac aagtacaaaa gtttttaagc

660

agatctgtgg aagatgttag acctcaccat actgatgcaa ataatcagtc tgcttggttt

720

gaagcacctg atcaaaaagac cttatccact cctcaagagg agcggatttc agctgtagaa

780

agtcagcctt cccgaaaaag aagtgtttcc catggatcta accatacgca aaaaccagac
 840
 gagcagagaa gtgaaccatc tgcaggcatt cctaaagtaa ccagcagatg cattgattca
 900
 aaagaaccaa tagaaaggcc agaggagaaa ccaaaaaagg aaggctttat acgatcttct
 960
 gaaggaccaa aacctgaaaa agtatataaa tctaaatcag aaactcgttg gggcccacga
 1020
 ccaagctcta acagaaggga agaagttaat gatagacctg tgagaagatc aggtccatt
 1080
 aaaaaacctg tacttagaga tatgaaagag gaacgggaac agaggaagga gaaagaagga
 1140
 gaaaaggccg aaaaggtcac tgaaaaagta gttgtaaagc ctgaaaagac ggaaaagaag
 1200
 gatcttcctc ctccccacc accacctcag ccaccagcac caattcagcc acagtcagtt
 1260
 ccaccaccaa ttcaaccaga agcagagaaa tttccttcaa cagaaactgc aactttggct
 1320
 caaaaacat ctcaggatac tgagaagcct ctggaacctg tgagtactgt tcaggtagag
 1380
 cctgcagtta agactgtaaa ccaacagact atggcagcac cagtagtcaa agaaaaagaa
 1440
 ctacaaaaga aagaaagaaa gcaagaaaaa gaaaaagaac tagaacggca gaaagaaaag
 1500
 gaaaaagaac tacaaaaaaa aa
 1522

<210> 5616

<211> 507

<212> PRT

<213> Homo sapiens

<400> 5616

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Val | Leu | Ser | Gly | Tyr | Phe | Lys | Gln | Phe | Gln | Lys | Ser | Leu | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Arg | Phe | Gln | Arg | Gln | Gln | Glu | Gln | Met | Lys | Gln | Gln | Gln | Trp | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Gln | Gln | Gln | Gln | Gly | Val | Leu | Pro | Gln | Thr | Val | Pro | Ser | Gln | Pro |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Ser | Ser | Ser | Thr | Val | Pro | Pro | Pro | Pro | His | Arg | Pro | Leu | Tyr | Gln | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Met | Gln | Pro | His | Pro | Gln | His | Leu | Ala | Ser | Met | Gly | Phe | Asp | Pro | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Trp | Leu | Met | Met | Gln | Ser | Tyr | Met | Asp | Pro | Arg | Met | Met | Ser | Gly | Arg |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Pro | Ala | Met | Asp | Ile | Pro | Pro | Ile | His | Pro | Gly | Met | Ile | Pro | Pro | Lys |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Pro | Leu | Met | Arg | Arg | Asp | Gln | Met | Glu | Gly | Ser | Pro | Asn | Ser | Ser | Glu |
| | | | 115 | | | 120 | | | | | | 125 | | | |
| Ser | Phe | Glu | His | Ile | Ala | Arg | Ser | Ala | Arg | Asp | His | Ala | Ile | Ser | Leu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ser | Glu | Pro | Arg | Met | Leu | Trp | Gly | Ser | Asp | Pro | Tyr | Pro | His | Ala | Glu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Pro | Gln | Gln | Ala | Thr | Thr | Pro | Lys | Ala | Thr | Glu | Glu | Pro | Glu | Asp | Val |

```

      165      170      175
Arg Ser Glu Ala Ala Leu Asp Gln Glu Gln Ile Thr Ala Ala Tyr Ser
      180      185      190
Val Glu His Asn Gln Leu Glu Ala His Pro Lys Ala Asp Phe Ile Arg
      195      200      205
Glu Ser Ser Glu Ala Gln Val Gln Lys Phe Leu Ser Arg Ser Val Glu
      210      215      220
Asp Val Arg Pro His His Thr Asp Ala Asn Asn Gln Ser Ala Cys Phe
225      230      235      240
Glu Ala Pro Asp Gln Lys Thr Leu Ser Thr Pro Gln Glu Glu Arg Ile
      245      250      255
Ser Ala Val Glu Ser Gln Pro Ser Arg Lys Arg Ser Val Ser His Gly
      260      265      270
Ser Asn His Thr Gln Lys Pro Asp Glu Gln Arg Ser Glu Pro Ser Ala
      275      280      285
Gly Ile Pro Lys Val Thr Ser Arg Cys Ile Asp Ser Lys Glu Pro Ile
      290      295      300
Glu Arg Pro Glu Glu Lys Pro Lys Lys Glu Gly Phe Ile Arg Ser Ser
305      310      315      320
Glu Gly Pro Lys Pro Glu Lys Val Tyr Lys Ser Lys Ser Glu Thr Arg
      325      330      335
Trp Gly Pro Arg Pro Ser Ser Asn Arg Arg Glu Glu Val Asn Asp Arg
      340      345      350
Pro Val Arg Arg Ser Gly Pro Ile Lys Lys Pro Val Leu Arg Asp Met
      355      360      365
Lys Glu Glu Arg Glu Gln Arg Lys Glu Lys Glu Gly Glu Lys Ala Glu
      370      375      380
Lys Val Thr Glu Lys Val Val Val Lys Pro Glu Lys Thr Glu Lys Lys
385      390      395      400
Asp Leu Pro Pro Pro Pro Pro Pro Pro Gln Pro Pro Ala Pro Ile Gln
      405      410      415
Pro Gln Ser Val Pro Pro Pro Ile Gln Pro Glu Ala Glu Lys Phe Pro
      420      425      430
Ser Thr Glu Thr Ala Thr Leu Ala Gln Lys Pro Ser Gln Asp Thr Glu
      435      440      445
Lys Pro Leu Glu Pro Val Ser Thr Val Gln Val Glu Pro Ala Val Lys
      450      455      460
Thr Val Asn Gln Gln Thr Met Ala Ala Pro Val Val Lys Glu Lys Glu
465      470      475      480
Leu Gln Lys Lys Glu Arg Lys Gln Glu Lys Glu Lys Glu Leu Glu Arg
      485      490      495
Gln Lys Glu Lys Glu Lys Glu Leu Gln Lys Lys
      500      505

```

<210> 5617

<211> 3480

<212> DNA

<213> Homo sapiens

<400> 5617

nactcaagct gaatgcttta ttgtaatctc ccaaactctg tggatagcgc ttaaagatta

60

aataagtttt cgtagggttat actatcattt ttttttctga cttttagaaa aaaaatgatc

120

atttacttga ttttttttaa gttgtat tttt taatttgaga ggatttcaca tgaactgtaa
180
tgtttgtgtt ttcagccagt gcacaaagac tctattagcc ttttcatggc acatgttcac
240
accactgtaa atgaaatgag taccagatat taccagaatg agagaagaca caactatacc
300
accccaaaga gtttttctaga acaaatatca ctgtttaaga acctgttgaa gaagaagcaa
360
aatgaggtat ccgagaaaaa agaacgcctg gtgaacggca tccaaaagct aaaaaccaca
420
gcctctcagg tgggagatct aaaagccaga cttgcctctc aagaagccga gctgcaactg
480
agaaatcatg atgccgaagc tctgatcaca aagatcggcc ttcagacgga gaaagtgagc
540
cgggaaaaga ccatcgctga tgctgaggag cgaaagggtga cagccattca gactgaagtg
600
ttccagaaac agagagaatg tgaagctgac ttactcaagg ctgagcctgc actgggtggct
660
gctacagctg cactcaatac actcaacagg gtcaacctca gtgagctgaa agcctttccc
720
aacctccca tcgcagttac caatgttact gcagccgtga tggtccttct ggctcctcgg
780
ggaagagtgc ccaaagaccg aagttggaaa gcagctaaag tcttcatggg aaaggttgat
840
gattttttgc aagcattaat taactatgac aaagagcaca ttccagagaa ctgtctaaaa
900
gtggtgaatg aacactat ttt gaaagaccca gagtttaatc caaacctgat tcgaaccaa
960
tcttttgcag cagctggcct gtgtgcctgg gtcatcaaca tcattaaatt ctatgaggtc
1020
tactgtgatg tggagccaaa acgccaagca ttagcccaag caaacttaga actggctgca
1080
gctactgaaa aactagaggc tatcaggaaa aagcttgtgg tgagtgc aaa ctatgacatt
1140
gaaaagtcag agaagattcg ctgggggtcaa tccattaagt cttttgaagc tcaagagaag
1200
acactctgtg gagatgttct tctcacggcg gcatttgtgt cttacgtcgg acccttcaca
1260
aggcagtatc gccaggagct ggtgcactgc aagtgggttc cttttcttca acagaaggtt
1320
tccattccac taaccgaagg cctggacttg atatccatgt tgacggatga tgctacaatt
1380
gccgcctgga ataacgaagg actgcccagt gacagaatgt ccaccgaaaa tgccgctatc
1440
ctaacacact gtgagcgctg gcctctgggtg atagatcccc agcaacaggg aattaagtg
1500
atcaagaata agtatggaat ggacctgaaa gtcacacatt tgggccagaa agggtttttg
1560
aatgccattg aaactgcttt ggcttttgggt gatgtcatct taattgaaaa tctcgaggaa
1620
acgatagatc cagtctctgga tccactactt ggcaggaaca caattaaaaa aggaaagtat
1680
atcaggattg gagataaaga atgtgaattt aacaagaact ttcgccttat ccttcacaca
1740

aaattggcaa atcctcacta taagccggaa ttacaagctc agacaactct cctcaatttc
1800
acagtcacag aagatggtct agaagcccag ctgctggcag aggttgtcag tattgaaagg
1860
ccagatttgg agaaacttaa gttggtattg acaaagcacc aaaatgattt taaaattgag
1920
ctcaagtatc tggaagacga tctccttttg cgcctttctg cggcagaggg aagctttctg
1980
gatgacacca aactggtaga gagattggag gcaacaaaga ccaccgtggc agagatagag
2040
cacaaggtga ttgaagccaa agaaaatgaa agaaaaatca acgaggcccg agaatgttac
2100
agaccagtgg cagcaagagc atctcttctt tattttgtta ttaatgacct ccaaaaaatc
2160
aaccctctct accaattctc tttgaaggct tttaacgtgc tgttccacag agcgatcgag
2220
caggctgaca aggtggaaga catgcagggc cgcattctta tcctgatgga gagcatcacc
2280
catgctgtct tcctctacac cagccaggcg ctggttgaga aggacaagct caccttctctg
2340
tccagatgg cttttcagat tttgttgaga aagaaagaga tagaccctct tgaattggat
2400
ttcctgcttc gattcacagt tgaacacact catctgagtc ccgttgactt cctaacttct
2460
cagtcatgga gtgctatcaa ggcaattgcc gtcattggaag aatttcgagg catagaccga
2520
gatgtggaag gatctgccaa gcagtggagg aagtgggtag aatccgagtg tccagaaaaa
2580
gaaaaattac ctcaagaatg gaagaagaaa agtttaatac agaagctgat tcttctgaga
2640
gcaatgcgcc ctgacagaat gacgtatgct ctcagaaatt ttgtagagga aaaactgggt
2700
gcgaagtatg tggagaggac cagattggac ttagttaaag cattcgaaga aagcagccca
2760
gccaccccca tattcttcat cctgtctcgg ggggtagatg cccttaaaga cctggagatt
2820
cttggaacaa gacttggtt tacaattgac tctggaaaat tccacaatgt gtcttttagga
2880
caaggtcagg agacggtggc agaagtggcc ctggagaaaag cttccaaagg aggacactgg
2940
gtcactctcc aaaatgttca tttggtagcc aagtggctag gaaccttgga gaagctcctt
3000
gaaagattca gccaaaggaag ccacagagat tacagggttt tcatgagtgc tgagtctgca
3060
cctacaccag atgagcatat catccctcaa ggactcctgg aaaattccat taagatcact
3120
aatgaacccc caacagggat gctggccaat ttgcatgccg ccctgtacaa ctttgatcag
3180
gtaagaaagc gaagcaggct aggagacaa tgaagtcaga gtcattctac aagactgtgg
3240
ggcccagaat caaccaggc atgtcattga gagggatgaa gcaagttctt aatgttcgca
3300
tgtggaaggg taggggtggg cgtgttttaa tctcttgaaa gaattgcccc tgtcatttcc
3360

gattctaata accagtaa atatttcagt ctcaccctaa cattaagaaa acttcagcta
 3420
 ctgtgtaggg aaagctaact aggtaacttc ttgaggagggt tgcttttttt tttttttttt
 3480

<210> 5618

<211> 1003

<212> PRT

<213> Homo sapiens

<400> 5618

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Lys | Asp | Ser | Ile | Ser | Leu | Phe | Met | Ala | His | Val | His | Thr | Thr | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asn | Glu | Met | Ser | Thr | Arg | Tyr | Tyr | Gln | Asn | Glu | Arg | Arg | His | Asn | Tyr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Thr | Pro | Lys | Ser | Phe | Leu | Glu | Gln | Ile | Ser | Leu | Phe | Lys | Asn | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Lys | Lys | Lys | Gln | Asn | Glu | Val | Ser | Glu | Lys | Lys | Glu | Arg | Leu | Val |
| | 50 | | | | 55 | | | | | | 60 | | | | |
| Asn | Gly | Ile | Gln | Lys | Leu | Lys | Thr | Thr | Ala | Ser | Gln | Val | Gly | Asp | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Lys | Ala | Arg | Leu | Ala | Ser | Gln | Glu | Ala | Glu | Leu | Gln | Leu | Arg | Asn | His |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Asp | Ala | Glu | Ala | Leu | Ile | Thr | Lys | Ile | Gly | Leu | Gln | Thr | Glu | Lys | Val |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ser | Arg | Glu | Lys | Thr | Ile | Ala | Asp | Ala | Glu | Glu | Arg | Lys | Val | Thr | Ala |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ile | Gln | Thr | Glu | Val | Phe | Gln | Lys | Gln | Arg | Glu | Cys | Glu | Ala | Asp | Leu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Leu | Lys | Ala | Glu | Pro | Ala | Leu | Val | Ala | Ala | Thr | Ala | Ala | Leu | Asn | Thr |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Leu | Asn | Arg | Val | Asn | Leu | Ser | Glu | Leu | Lys | Ala | Phe | Pro | Asn | Pro | Pro |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Ile | Ala | Val | Thr | Asn | Val | Thr | Ala | Ala | Val | Met | Val | Leu | Leu | Ala | Pro |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Arg | Gly | Arg | Val | Pro | Lys | Asp | Arg | Ser | Trp | Lys | Ala | Ala | Lys | Val | Phe |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Met | Gly | Lys | Val | Asp | Asp | Phe | Leu | Gln | Ala | Leu | Ile | Asn | Tyr | Asp | Lys |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Glu | His | Ile | Pro | Glu | Asn | Cys | Leu | Lys | Val | Val | Asn | Glu | His | Tyr | Leu |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Lys | Asp | Pro | Glu | Phe | Asn | Pro | Asn | Leu | Ile | Arg | Thr | Lys | Ser | Phe | Ala |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Ala | Ala | Gly | Leu | Cys | Ala | Trp | Val | Ile | Asn | Ile | Ile | Lys | Phe | Tyr | Glu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Val | Tyr | Cys | Asp | Val | Glu | Pro | Lys | Arg | Gln | Ala | Leu | Ala | Gln | Ala | Asn |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Leu | Glu | Leu | Ala | Ala | Ala | Thr | Glu | Lys | Leu | Glu | Ala | Ile | Arg | Lys | Lys |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Leu | Val | Val | Ser | Ala | Asn | Tyr | Asp | Ile | Glu | Lys | Ser | Glu | Lys | Ile | Arg |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Trp | Gly | Gln | Ser | Ile | Lys | Ser | Phe | Glu | Ala | Gln | Glu | Lys | Thr | Leu | Cys |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Gly | Asp | Val | Leu | Leu | Thr | Ala | Ala | Phe | Val | Ser | Tyr | Val | Gly | Pro | Phe |

[illegible]

| | | |
|---|-----|------|
| 770 | 775 | 780 |
| Trp Val Glu Ser Glu Cys Pro Glu Lys Glu Lys Leu Pro Gln Glu Trp | | |
| 785 | 790 | 800 |
| Lys Lys Lys Ser Leu Ile Gln Lys Leu Ile Leu Leu Arg Ala Met Arg | | |
| | 805 | 810 |
| Pro Asp Arg Met Thr Tyr Ala Leu Arg Asn Phe Val Glu Glu Lys Leu | | |
| | 820 | 825 |
| Gly Ala Lys Tyr Val Glu Arg Thr Arg Leu Asp Leu Val Lys Ala Phe | | |
| | 835 | 840 |
| Glu Glu Ser Ser Pro Ala Thr Pro Ile Phe Phe Ile Leu Ser Pro Gly | | |
| | 850 | 855 |
| Val Asp Ala Leu Lys Asp Leu Glu Ile Leu Gly Lys Arg Leu Gly Phe | | |
| 865 | 870 | 875 |
| Thr Ile Asp Ser Gly Lys Phe His Asn Val Ser Leu Gly Gln Gly Gln | | |
| | 885 | 890 |
| Glu Thr Val Ala Glu Val Ala Leu Glu Lys Ala Ser Lys Gly Gly His | | |
| | 900 | 905 |
| Trp Val Ile Leu Gln Asn Val His Leu Val Ala Lys Trp Leu Gly Thr | | |
| | 915 | 920 |
| Leu Glu Lys Leu Leu Glu Arg Phe Ser Gln Gly Ser His Arg Asp Tyr | | |
| | 930 | 935 |
| Arg Val Phe Met Ser Ala Glu Ser Ala Pro Thr Pro Asp Glu His Ile | | |
| 945 | 950 | 955 |
| Ile Pro Gln Gly Leu Leu Glu Asn Ser Ile Lys Ile Thr Asn Glu Pro | | |
| | 965 | 970 |
| Pro Thr Gly Met Leu Ala Asn Leu His Ala Ala Leu Tyr Asn Phe Asp | | |
| | 980 | 985 |
| Gln Val Arg Lys Arg Ser Arg Leu Gly Arg Gln | | |
| | 995 | 1000 |

<210> 5619

<211> 1219

<212> DNA

<213> Homo sapiens

<400> 5619

```

aagccggaga gctggagctt tgaagccacc ccggtcaaag gatgctgagt ccggagcgcc
60
tagccctacc ggactacgag tatctggctc agcgacatgt cctcacctac atggaggatg
120
cagtgtgcca gctgctagaa aacaggggaag atattagcca atatggaatt gccaggttct
180
tcaactgaata ttttaacagt gtatgccagg gaacacacat tctctttcga gaattcagct
240
tcgtccaagc cccccccac aataggggtat cattttttacg ggccttctgg agatgcttcc
300
gaactgtggg caaaaatggc gatttgctga ccatgaaaga atatcactgt ttgctgcaat
360
tactgtgtcc tgatttcccg ctggagctca ctcagaaagc agccaggatt gtgctcatgg
420
acgatgccat ggactgcttg atgtcttttt cagatttctt ctttgccttc cagatccagt
480
tttactactc agaattcctg gacagtgtgg ctgccatcta tgaggacctg ctgtcaggca
540

```

agaaccccaa cacagtgatt gtgccgacgt cgtccagtgg gcagcaccgc caacgacctg
 600
 ccttgggcgg ggccggcacg ctggagggcg tggagggcgtc gctgttctac cagtgtctgg
 660
 aaaacctgtg tgatcggcac aagtacagct gcccaccccc agcacttgtc aaagaggccc
 720
 tcagcaatgt tcagagactg accttctatg gattcctcat ggctctctca aagcaccgtg
 780
 gaatcaacca agccctcggg aagtcagagc taagcagccg tcagcctctc ctgccgcaca
 840
 acacagggag cagctggcct ctgttagcaa cacgggtcca gaggggaagg ggcattacca
 900
 tctctgcctt gacttcccag ggccggactc aatcccaggg agcaggaata tggcgacaaa
 960
 acatggctct tacacattcc catggtaggg gacagccctc cctgcctgca gccctgcccc
 1020
 aacatgaaac cacctcccca tagcagaagc gccagcccc tcctcagaga accccagctc
 1080
 tgctttgggg agcagcctgc aggtcgggca gacacaggac tatttactca gtgacgctag
 1140
 agattatata tcagagagac ctgaatccca tttataaaca aggcaaaggt gtgtctgcgg
 1200
 agaccttttt tccaagctg
 1219

<210> 5620

<211> 333

<212> PRT

<213> Homo sapiens

<400> 5620

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Ser | Pro | Glu | Arg | Leu | Ala | Leu | Pro | Asp | Tyr | Glu | Tyr | Leu | Ala |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Gln | Arg | His | Val | Leu | Thr | Tyr | Met | Glu | Asp | Ala | Val | Cys | Gln | Leu | Leu |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| Glu | Asn | Arg | Glu | Asp | Ile | Ser | Gln | Tyr | Gly | Ile | Ala | Arg | Phe | Phe | Thr |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Glu | Tyr | Phe | Asn | Ser | Val | Cys | Gln | Gly | Thr | His | Ile | Leu | Phe | Arg | Glu |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Phe | Ser | Phe | Val | Gln | Ala | Thr | Pro | His | Asn | Arg | Val | Ser | Phe | Leu | Arg |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Ala | Phe | Trp | Arg | Cys | Phe | Arg | Thr | Val | Gly | Lys | Asn | Gly | Asp | Leu | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Thr | Met | Lys | Glu | Tyr | His | Cys | Leu | Leu | Gln | Leu | Leu | Cys | Pro | Asp | Phe |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Pro | Leu | Glu | Leu | Thr | Gln | Lys | Ala | Ala | Arg | Ile | Val | Leu | Met | Asp | Asp |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Ala | Met | Asp | Cys | Leu | Met | Ser | Phe | Ser | Asp | Phe | Leu | Phe | Ala | Phe | Gln |
| | | | 130 | | | | 135 | | | | 140 | | | | |
| Ile | Gln | Phe | Tyr | Tyr | Ser | Glu | Phe | Leu | Asp | Ser | Val | Ala | Ala | Ile | Tyr |
| 145 | | | | | 150 | | | | 155 | | | | | 160 | |
| Glu | Asp | Leu | Leu | Ser | Gly | Lys | Asn | Pro | Asn | Thr | Val | Ile | Val | Pro | Thr |
| | | | | 165 | | | | 170 | | | | | | 175 | |
| Ser | Ser | Ser | Gly | Gln | His | Arg | Gln | Arg | Pro | Ala | Leu | Gly | Gly | Ala | Gly |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| | | | | 180 | | | | 185 | | | | | 190 | | | | |
| Thr | Leu | Glu | Gly | Val | Glu | Ala | Ser | Leu | Phe | Tyr | Gln | Cys | Leu | Glu | Asn | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | |
| Leu | Cys | Asp | Arg | His | Lys | Tyr | Ser | Cys | Pro | Pro | Pro | Ala | Leu | Val | Lys | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | |
| Glu | Ala | Leu | Ser | Asn | Val | Gln | Arg | Leu | Thr | Phe | Tyr | Gly | Phe | Leu | Met | | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | | |
| Ala | Leu | Ser | Lys | His | Arg | Gly | Ile | Asn | Gln | Ala | Leu | Gly | Lys | Ser | Glu | | |
| | | | 245 | | | | | 250 | | | | | | 255 | | | |
| Leu | Ser | Ser | Arg | Gln | Pro | Leu | Leu | Pro | His | Asn | Thr | Gly | Ser | Ser | Trp | | |
| | | 260 | | | | 265 | | | | | | 270 | | | | | |
| Pro | Leu | Leu | Ala | Thr | Arg | Leu | Gln | Arg | Gly | Arg | Gly | Ile | Thr | Ile | Ser | | |
| | 275 | | | | | 280 | | | | | | 285 | | | | | |
| Ala | Leu | Thr | Ser | Gln | Gly | Arg | Thr | Gln | Ser | Gln | Gly | Ala | Gly | Ile | Trp | | |
| 290 | | | | | 295 | | | | | 300 | | | | | | | |
| Arg | Gln | Asn | Met | Ala | Leu | Thr | His | Ser | His | Gly | Arg | Gly | Gln | Pro | Ser | | |
| 305 | | | | 310 | | | | | 315 | | | | | 320 | | | |
| Leu | Pro | Ala | Ala | Leu | Pro | Gln | His | Glu | Thr | Thr | Ser | Pro | | | | | |
| | | | 325 | | | | | 330 | | | | | | | | | |

<210> 5621

<211> 456

<212> DNA

<213> Homo sapiens

<400> 5621

```

tttttgtgaa atagaatttta ttgtggctct gattatgtac acgtgagatg gcctggctgg
60
gccggccggg ctcacatggg ttgtacaata aatacatctg tggggcgggc tctccgcagc
120
cggaagggc caccgccacg gttagtcca gttccgggc tccagcttc atggggccct
180
tggccacctt cctctcggcg cgtttggcct ccatctcccg ccgcgctcc tcgcgttct
240
tccgggccag ctcagccttg acctgtcctg ggtgctggga cgtgcagaca gggtagcgaa
300
ggggtcgccc ttgtcgctgg actctgggcc accccagtta tactcgctgg ccagccgtgt
360
accgtcagga ggtggctcct gggagcttgg ctgaaccggt ggcggtggcc cttcccggt
420
gcggagagcc cgccccacag atgtatttat tgtaca
456

```

<210> 5622

<211> 82

<212> PRT

<213> Homo sapiens

<400> 5622

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Trp | Leu | Gly | Arg | Pro | Gly | Ser | His | Gly | Leu | Tyr | Asn | Lys | Tyr |
| 1 | | | 5 | | | | 10 | | | | | 15 | | | |
| Ile | Cys | Gly | Ala | Gly | Ser | Pro | Gln | Pro | Gly | Arg | Ala | Thr | Ala | Thr | Val |
| | | 20 | | | | 25 | | | | | 30 | | | | |
| Gln | Ser | Ser | Phe | Arg | Ala | Pro | Ser | Phe | Met | Gly | Pro | Leu | Ala | Thr | Phe |

```

          35          40          45
Leu Ser Ala Arg Leu Ala Ser Ile Ser Arg Arg Arg Ser Ser Arg Phe
          50          55          60
Phe Arg Ala Ser Ser Ala Leu Thr Cys Pro Gly Cys Trp Asp Val Gln
65          70          75          80
Thr Gly

```

<210> 5623
 <211> 357
 <212> DNA
 <213> Homo sapiens

```

<400> 5623
nctggaagaa ctcgtcatgc tctttgtagc gtggtgcttc tgttgctcac aggacaactt
60
gcctttgatg attttcaaga gagttgtgct atgatgtggc aaaagtatgc aggaagcagg
120
cgggtcaatgc ctctgggagc aaggatcctt ttccacggtg tgttctatgc cgggggcttt
180
gccattgtgt attacctcat tcaaaagttt cattccaggg ctttatatta caagttggca
240
gtggagcagc tgcagagcca tcccgaggca caggaagctc tgggccctcc tctcaacatc
300
cattatctca agctcatcga cagggaaaac ttcgtggaca ttgttgatgc caagttg
357

```

<210> 5624
 <211> 88
 <212> PRT
 <213> Homo sapiens

```

<400> 5624
Met Trp Gln Lys Tyr Ala Gly Ser Arg Arg Ser Met Pro Leu Gly Ala
1          5          10          15
Arg Ile Leu Phe His Gly Val Phe Tyr Ala Gly Gly Phe Ala Ile Val
          20          25          30
Tyr Tyr Leu Ile Gln Lys Phe His Ser Arg Ala Leu Tyr Tyr Lys Leu
          35          40          45
Ala Val Glu Gln Leu Gln Ser His Pro Glu Ala Gln Glu Ala Leu Gly
          50          55          60
Pro Pro Leu Asn Ile His Tyr Leu Lys Leu Ile Asp Arg Glu Asn Phe
65          70          75          80
Val Asp Ile Val Asp Ala Lys Leu
          85

```

<210> 5625
 <211> 1017
 <212> DNA
 <213> Homo sapiens

```

<400> 5625
gccgactcgt ggtacctggc gcttctgggc ttcgctgagc acttccgcac ttccagcccg
60

```


cccaaaatcc gcctgtgcgt gcactgcctg caggccgtgt tccccttcaa gccgccgcag
 120
 cgcacgcagg cccgtacaca cctgcagctg ggctccgttc tctatcacca caccaagaac
 180
 agcgagcagg cgcgagacca cctggagaag gcgtgggtga tatcacagca aatcccacag
 240
 ttcgaagatg ttaaatttga agcagcaagt ctgttgtctg aattgtactg tcaagagaat
 300
 tccgttgatg cagcaaagcc gctgctgcgg aaggcgatcc agatctcaca gcagacccca
 360
 tattggcact gccgcctgct cttccagctc gctcaactgc acacgcttga gaaggacctg
 420
 gtgtcggcct gtgacctcct ggggtgtaggg gccgagtacg cccgggtggt gggatctgaa
 480
 tacacacggg cgctgttcct cctcagcaag gggatgctgc tgctgatgga gcgaaagctg
 540
 caggaggtgc acccgctgct gaccctctgc gggcagatcg tggagaactg gcaggggaac
 600
 cccatccaga aggagtcgct gcgtgtcttc ttctgggtgc tccagggtcac ccactatctg
 660
 gatgccgggc aggtgaagag cgtgaagccg tgtctgaagc agctgcagca gtgcatccag
 720
 accatctcca cactgcacga tgatgagatc ctgcccagca accccgctga cctcttccac
 780
 tggctgcccc aggagcacat gtgtgtgctt gtctacctgg tgactgtgat gcactccatg
 840
 caggccggct acctggagaa ggcgagaaag tacacggaca aggccctcat gcagctggag
 900
 aagctcaaga tgctggactg cagccccatc ctgtcatcct tccaagtgat cctgctggag
 960
 cacatcatca tgtgccgcct tgtcacgggt cacaaggcca cggcgctgca ggagatc
 1017

<210> 5626

<211> 339

<212> PRT

<213> Homo sapiens

<400> 5626

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asp | Ser | Trp | Tyr | Leu | Ala | Leu | Leu | Gly | Phe | Ala | Glu | His | Phe | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Thr | Ser | Ser | Pro | Pro | Lys | Ile | Arg | Leu | Cys | Val | His | Cys | Leu | Gln | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Val | Phe | Pro | Phe | Lys | Pro | Pro | Gln | Arg | Ile | Glu | Ala | Arg | Thr | His | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gln | Leu | Gly | Ser | Val | Leu | Tyr | His | His | Thr | Lys | Asn | Ser | Glu | Gln | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Arg | Ser | His | Leu | Glu | Lys | Ala | Trp | Leu | Ile | Ser | Gln | Gln | Ile | Pro | Gln |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Phe | Glu | Asp | Val | Lys | Phe | Glu | Ala | Ala | Ser | Leu | Leu | Ser | Glu | Leu | Tyr |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Cys | Gln | Glu | Asn | Ser | Val | Asp | Ala | Ala | Lys | Pro | Leu | Leu | Arg | Lys | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ile | Gln | Ile | Ser | Gln | Gln | Thr | Pro | Tyr | Trp | His | Cys | Arg | Leu | Leu | Phe |

| | | |
|---|-----|-----|
| 115 | 120 | 125 |
| Gln Leu Ala Gln Leu His Thr Leu Glu Lys Asp Leu Val Ser Ala Cys | | |
| 130 | 135 | 140 |
| Asp Leu Leu Gly Val Gly Ala Glu Tyr Ala Arg Val Val Gly Ser Glu | | |
| 145 | 150 | 155 |
| Tyr Thr Arg Ala Leu Phe Leu Leu Ser Lys Gly Met Leu Leu Leu Met | | |
| 165 | 170 | 175 |
| Glu Arg Lys Leu Gln Glu Val His Pro Leu Leu Thr Leu Cys Gly Gln | | |
| 180 | 185 | 190 |
| Ile Val Glu Asn Trp Gln Gly Asn Pro Ile Gln Lys Glu Ser Leu Arg | | |
| 195 | 200 | 205 |
| Val Phe Phe Leu Val Leu Gln Val Thr His Tyr Leu Asp Ala Gly Gln | | |
| 210 | 215 | 220 |
| Val Lys Ser Val Lys Pro Cys Leu Lys Gln Leu Gln Gln Cys Ile Gln | | |
| 225 | 230 | 235 |
| Thr Ile Ser Thr Leu His Asp Asp Glu Ile Leu Pro Ser Asn Pro Ala | | |
| 245 | 250 | 255 |
| Asp Leu Phe His Trp Leu Pro Lys Glu His Met Cys Val Leu Val Tyr | | |
| 260 | 265 | 270 |
| Leu Val Thr Val Met His Ser Met Gln Ala Gly Tyr Leu Glu Lys Ala | | |
| 275 | 280 | 285 |
| Gln Lys Tyr Thr Asp Lys Ala Leu Met Gln Leu Glu Lys Leu Lys Met | | |
| 290 | 295 | 300 |
| Leu Asp Cys Ser Pro Ile Leu Ser Ser Phe Gln Val Ile Leu Leu Glu | | |
| 305 | 310 | 315 |
| His Ile Ile Met Cys Arg Leu Val Thr Gly His Lys Ala Thr Ala Leu | | |
| 325 | 330 | 335 |
| Gln Glu Ile | | |

<210> 5627

<211> 1401

<212> DNA

<213> Homo sapiens

<400> 5627

```

nctctcacac tgtggaattc tctctatcag cctcaaagtc cagatttgga aagggagtct
60
cagcgagggg cagcagctgg cccaaccggg aggcagagcg gcaactgaac tctagccgga
120
aagagccagg gttatgtgca catgggaggt ggggaggaca ggggctgtat gtgaccctca
180
catctgttcc tcgcgcccca gatggcttct gctgectgct ccatggaccc catcgacagc
240
tttgagctcc tggatctcct gtttgaccgg caggacggca tcctgagaca cgtggagctg
300
ggcgaggggt ggggtcacgt caaggaccag gtccctgccaa accccgactc tgacgacttc
360
ctcagctcca tcctgggctc tggagactca ctgccagct cccactctg gtcccccgaa
420
ggcagtgata gtggcatctc cgaagacctc ccctccgacc cccaggacac ccctccacgc
480
agcggaccag ccacctcccc cgccgggtgc catcctgccc agcctggcaa ggggccttgc
540

```

ctctcctatc atcctggcaa ctcttgctcc accacaaccc cagggccagt gatccaacaa
 600
 cagcatcacc tgggggcctc ctacctcctg cgacctgggg ctgggcactg tcaggagctg
 660
 gtgctcaccg aggatgagaa gaagctgctg gctaaagaag gcatcacctt gccactcag
 720
 ctgcccctca ctaagtacga ggagcgagtg ctgaaaaaaaa tccgccggaa aatccggaac
 780
 aagcagtcgg cgcaagaaaag caggaagaag aagaaggaat atatcgatgg cctggagact
 840
 cggtcctggt gctgtccttt gccctcatca tcctcccctc catcagccct tttggcccca
 900
 acaaaaccga gagccctggg gactttgcgc ctgtacgagt gttctccaga actttgcaca
 960
 acgatgctgc ctcccgctg gctgctgatg ctgtgccagg ctccgaggcc ccaggacccc
 1020
 gacccgaggc tgacacaacc cgagaagagt ctccaggaag ccccggggca gactggggct
 1080
 tccaggacac cggaacctg accaattcga cggaggagct ggacaacgcc accctggtcc
 1140
 tgaggaatgc aacagagggg ctgggccagg tcgccctgct ggactgggtg gcgcctgggc
 1200
 cgagcactgg ctcaggacgt gcagggctgg aggcggcggg agacgagctg tgagccccac
 1260
 caggactatg ctcccaggcc cctctgcccc ggggtgcctt ggggatgctg cactgggcag
 1320
 ctaccacact ggggatggga cgtgaggcca agaccccagc agagatgcca gaatggggga
 1380
 ggcacagctc atagccacac a
 1401

<210> 5628

<211> 299

<212> PRT

<213> Homo sapiens

<400> 5628

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Ser | Ala | Cys | Ser | Met | Asp | Pro | Ile | Asp | Ser | Phe | Glu | Leu |
| 1 | | | 5 | | | | 10 | | | | | 15 | | |
| Leu | Asp | Leu | Leu | Phe | Asp | Arg | Gln | Asp | Gly | Ile | Leu | Arg | His | Val |
| | | 20 | | | | | 25 | | | | | 30 | | Glu |
| Leu | Gly | Glu | Gly | Trp | Gly | His | Val | Lys | Asp | Gln | Val | Leu | Pro | Asn |
| | | 35 | | | | 40 | | | | | 45 | | | Pro |
| Asp | Ser | Asp | Asp | Phe | Leu | Ser | Ser | Ile | Leu | Gly | Ser | Gly | Asp | Ser |
| | 50 | | | | | 55 | | | | 60 | | | | Leu |
| Pro | Ser | Ser | Pro | Leu | Trp | Ser | Pro | Glu | Gly | Ser | Asp | Ser | Gly | Ile |
| | 65 | | | | 70 | | | | 75 | | | | | 80 |
| Glu | Asp | Leu | Pro | Ser | Asp | Pro | Gln | Asp | Thr | Pro | Pro | Arg | Ser | Gly |
| | | | 85 | | | | | 90 | | | | | | 95 |
| Ala | Thr | Ser | Pro | Ala | Gly | Cys | His | Pro | Ala | Gln | Pro | Gly | Lys | Gly |
| | | | 100 | | | | | 105 | | | | 110 | | Pro |
| Cys | Leu | Ser | Tyr | His | Pro | Gly | Asn | Ser | Cys | Ser | Thr | Thr | Thr | Pro |
| | | 115 | | | | | 120 | | | | | 125 | | Gly |
| Pro | Val | Ile | Gln | Gln | Gln | His | His | Leu | Gly | Ala | Ser | Tyr | Leu | Leu |
| | | | | | | | | | | | | | | Arg |

| | | |
|---|-----|-----|
| 130 | 135 | 140 |
| Pro Gly Ala Gly His Cys Gln Glu Leu Val Leu Thr Glu Asp Glu Lys | | |
| 145 | 150 | 155 |
| Lys Leu Leu Ala Lys Glu Gly Ile Thr Leu Pro Thr Gln Leu Pro Leu | | |
| 165 | 170 | 175 |
| Thr Lys Tyr Glu Glu Arg Val Leu Lys Lys Ile Arg Arg Lys Ile Arg | | |
| 180 | 185 | 190 |
| Asn Lys Gln Ser Ala Gln Glu Ser Arg Lys Lys Lys Lys Glu Tyr Ile | | |
| 195 | 200 | 205 |
| Asp Gly Leu Glu Thr Arg Ser Cys Cys Cys Pro Leu Pro Ser Ser Ser | | |
| 210 | 215 | 220 |
| Ser Pro Pro Ser Ala Leu Leu Ala Pro Thr Lys Pro Arg Ala Leu Gly | | |
| 225 | 230 | 235 |
| Thr Leu Arg Leu Tyr Glu Cys Ser Pro Glu Leu Cys Thr Thr Met Leu | | |
| 245 | 250 | 255 |
| Pro Pro Ala Trp Leu Leu Met Leu Cys Gln Ala Pro Arg Pro Gln Asp | | |
| 260 | 265 | 270 |
| Pro Asp Pro Arg Leu Thr Gln Pro Glu Lys Ser Leu Gln Glu Ala Pro | | |
| 275 | 280 | 285 |
| Gly Gln Thr Gly Ala Ser Arg Thr Pro Arg Thr | | |
| 290 | 295 | |

<210> 5629

<211> 428

<212> DNA

<213> Homo sapiens

<400> 5629

```

gtgcacgacc ccactgaatc atcccacaac catggatggg agacacactc agtctccttt
60
aacagaagat aaagctgggg cttacagaga atgtacaact tggcccaggg cacaccagtt
120
agccatcagg ggcagnctg ctattcaggt ctgggactgt gggactccag agcccatgtt
180
ttttacgagg atgccatact gccacaatgg atggtgtctt tatctcctga tatatgattg
240
tgtgttggga ggcgtggggg ggcagctgga agaattggaga ggcataattg tggaggatct
300
tccccattc tctgtaccc tctcttgag ctcccagttc catctgagaa attatctact
360
ctgagaaatc gtcacaacac agcatggttg tgagtgcagt ggcagaagcc tgtgcctggg
420
tgtatggg
428

```

<210> 5630

<211> 110

<212> PRT

<213> Homo sapiens

<400> 5630

| |
|---|
| Met Asp Gly Arg His Thr Gln Ser Pro Leu Thr Glu Asp Lys Ala Gly |
| 1 5 10 15 |
| Ala Tyr Arg Glu Cys Thr Thr Trp Pro Arg Ala His Gln Leu Ala Ile |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | 5 | | 10 | | 15 | | | | | | | | | |
| Ala | Gly | Ala | Gly | Ala | Gly | His | Leu | Thr | Pro | Gln | Ala | Ser | Pro | Thr | Ser |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Glu | Leu | Pro | Thr | Ala | Lys | Thr | Pro | Gly | Glu | Ala | Gly | Arg | Gly | Gly | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | Gly | Lys | Glu | Gly | Leu | Cys | Glu | Ser | Lys | Pro | His | Pro | Gln | Ser | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ala | Glu | Thr | Gln | Val | Cys | Lys | Ser | His | Pro | Pro | Pro | Thr | Ser | Ser | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Phe | Glu | Ala | Ser | Ser | Thr | Arg | Gly | Arg | Ala | Gly | Ala | Ala | Gln | Arg | Pro |
| | | | 85 | | | | | | 90 | | | | 95 | | |
| Glu | Lys | Gly | Lys | Pro | His | Arg | Arg | Lys | Leu | Lys | Ala | Ser | Val | Pro | Cys |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Val | Ser | Ala | Glu | Arg | Val | Asn | Gly | Pro | Lys | Gly | Ser | Ser | Leu | Gln | Thr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ala | Arg | Ile | His | Pro | Thr | Gly | Gly | His | Arg | Thr | Arg | Pro | Gly | Pro | Ser |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ala | Ser | Val | Pro | Val | Gln | Pro | Thr | Pro | Val | Gln | Pro | Gly | Ala | Leu | Ser |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Asp | Leu | Thr | Thr | Arg | Val | Pro | Ser | Thr | Cys | Val | His | Thr | Gln | Met | Gln |
| | | | 165 | | | | | | 170 | | | | 175 | | |
| Glu | Arg | Thr | His | Thr | Thr | Val | | | | | | | | | |
| | | 180 | | | | | | | | | | | | | |

<210> 5633

<211> 2181

<212> DNA

<213> Homo sapiens

<400> 5633

```

gccaatgtcc ctgtggccac tcagctgaga ccgagggcga cctgggcagc tgcgggtgtc
60
tgtcacctcc gtgtcccaca tagatgccag gctctgcttc tgtggttctg gaggtcatta
120
gtcaattgta tgtgggtgctg tctgtcctcc tgattgcaga ggaggaagga accccttaaa
180
tgagcggggt ctgagtgtg gggccgctgg tctgctctgc ctgggtgggat tctccagtgc
240
tggcttcac tgtgccccag cccactctc accaacaagg agggcgtgaa aatgacaagg
300
aatccatccc tagagttcac aggagatcta gggcagagtt tccaagctgc agctgctctg
360
gccctgtgtg agctgctgct ctgaggaagc ccagggtga ggtagctacc aggcggaggc
420
tgggttttga ggcctccaca tcagggaatt gagcggtagg ggtttcagcc ttcacgttgg
480
tcgccgact gtatgggaag tggggtctgg ggtctgcttg ccagttctca ccgtcctctt
540
cctccccaaa gccgcctgga taaggggctg gccgcactgg tgcgggagcg tggcgcggat
600
ctgggtgtca tcgagggcat gggcgtgct gtccacacaa actaccacgc agcctgcg
660
tgcgagagcc tcaagctggc cgtcatcaag aacgcgtggc tggccgagcg gctgggcggc
720

```

cggtctttca gcgccatctt caagtacgag gtcccagccg agtgaggcgc tgcagctgcc
780
ggactcttct gcttgtcact tgtccgagtg gcttcagaga ttaaaggggc cccctcataa
840
atgtgcctta attttcgcag ataacagggg gaatagacat ctttttggga gtcttcccct
900
ttgtcaggga gctactcctt agagggacag aggtcatcct ggctgcaac tcaggccccg
960
ccctgaacga cgtgaccac agcgagtccc tcatcgtggc agagcgtatt gcgggcatgg
1020
accctgaccg tgccgagcct gctggacacc agggagcact gtctgaacga gttcaacttc
1080
ccggtacccct actccaaagt gaagcagcgg gagaatggcg tggcgctgag gtgcttcccc
1140
ggggtcgtgc gctccctgga cgcgctgggc tgggaggaac ggcagctggc gctggtgaaa
1200
ggcctcctgg cggggaatgt cttcgactgg ggggcaaag ccgtgtctgc tgtccttgaa
1260
tccgaccct actttgggtt tgaagaagca aagaggaagt tacaagaaag accctggctc
1320
gtggattcct acagcgagtg gcttcagaga ttaaaggggc cccctcataa atgtgcctta
1380
attttcgcag ataacagtgg aatagacatc attttgggag tcttccccctt tgtcagggag
1440
ctactcctta gagggacaga ggtcatcctg gcgtgcaact caggccccgc cctgaacgac
1500
gtgaccaca gcgagtcctt catcgtggca gagcgtattg cgggcatgga ccctgtcgtg
1560
cactctgcgc tccaggaaga gaggtgctg ctggtgcaga cgggctccag ctccccgtgc
1620
ctcgacctca gccgcctgga taaggggctg gccgcactgg tgcgggagcg tggcgcggtat
1680
ctggtggtca tcgaggcat gggccgtgct gtccacacaa actaccacgc agccctgcgc
1740
tgcgagagcc tcaagctggc cgtcatcaag aacgcgtggc tggccgagcg gctgggcggc
1800
cggctcttca gcgtcatctt caagtacgag gtcccagccg agtgaggcgc tgcagctgcc
1860
ggactcttct gcttgtcact tgtcaggaat gtgtttttac caccacaggg aaactgcgtt
1920
caaatcaacg tatattatg gtactgctgt gacgcggcac atacacccca gccgcacaga
1980
tgctgtgac ccagaggcga gacgcagctt tgtcctggga gacgttcata ttggaatcta
2040
tttaactgct aaagaacctt ttatatatat atatatatat aaatagagag atctatacag
2100
gtatgtctga cgggacgcag caccgtgggc acgcaccaa tagagttttt aaaagaggaa
2160
aaaaaactct atttggtgcg t
2181

<210> 5634

<211> 289

<212> PRT

<213> Homo sapiens

<400> 5634

```

Pro Thr Ala Ser Pro Ser Ser Trp Gln Ser Val Leu Arg Ala Trp Thr
1      5      10      15
Leu Thr Val Arg Ser Leu Leu Asp Thr Arg Glu His Cys Leu Asn Glu
20     25     30
Phe Asn Phe Pro Asp Pro Tyr Ser Lys Val Lys Gln Arg Glu Asn Gly
35     40     45
Val Ala Leu Arg Cys Phe Pro Gly Val Val Arg Ser Leu Asp Ala Leu
50     55     60
Gly Trp Glu Glu Arg Gln Leu Ala Leu Val Lys Gly Leu Leu Ala Gly
65     70     75     80
Asn Val Phe Asp Trp Gly Ala Lys Ala Val Ser Ala Val Leu Glu Ser
85     90     95
Asp Pro Tyr Phe Gly Phe Glu Glu Ala Lys Arg Lys Leu Gln Glu Arg
100    105    110
Pro Trp Leu Val Asp Ser Tyr Ser Glu Trp Leu Gln Arg Leu Lys Gly
115    120    125
Pro Pro His Lys Cys Ala Leu Ile Phe Ala Asp Asn Ser Gly Ile Asp
130    135    140
Ile Ile Leu Gly Val Phe Pro Phe Val Arg Glu Leu Leu Leu Arg Gly
145    150    155    160
Thr Glu Val Ile Leu Ala Cys Asn Ser Gly Pro Ala Leu Asn Asp Val
165    170    175
Thr His Ser Glu Ser Leu Ile Val Ala Glu Arg Ile Ala Gly Met Asp
180    185    190
Pro Val Val His Ser Ala Leu Gln Glu Glu Arg Leu Leu Leu Val Gln
195    200    205
Thr Gly Ser Ser Ser Pro Cys Leu Asp Leu Ser Arg Leu Asp Lys Gly
210    215    220
Leu Ala Ala Leu Val Arg Glu Arg Gly Ala Asp Leu Val Val Ile Glu
225    230    235    240
Gly Met Gly Arg Ala Val His Thr Asn Tyr His Ala Ala Leu Arg Cys
245    250    255
Glu Ser Leu Lys Leu Ala Val Ile Lys Asn Ala Trp Leu Ala Glu Arg
260    265    270
Leu Gly Gly Arg Leu Phe Ser Val Ile Phe Lys Tyr Glu Val Pro Ala
275    280    285
Glu

```

<210> 5635

<211> 614

<212> DNA

<213> Homo sapiens

<400> 5635

```

nntgtgaaag atgttgcaga agtgttccag aagtggctga agatagaagg aaaaaagtgc
60
cactgcctat cagaaaaaac aaaacaaaac atgggaaata caaccaccaa attccgtaaa
120
gcactcatca atggtgatga aaacctggcc tgccaaatat atgaaaacaa tcttcagcta
180

```


aaagaatctc ttgatccaaa tacatcttat ggggagccct accagcacia tactccatta
 240
 cattatgctg ctagacatgg aatgaataaa atattaggag atgatttcag aagagcagat
 300
 tgtctgcaga tgatcttaaa atggaaagga gcaaaacttg accaggggtga atatgagaga
 360
 gcagctattg atgctgttga taacaaaaaa aacacaccct tgcactatgc tgctgcctca
 420
 gggatgaaag cctgtgtaga aaaacatgga ggagacttgt ttgctgagaa tgaaaataaa
 480
 gatactcctt gtgattgtgc tgaaaagcaa caccacaaag atttggccct caatctggaa
 540
 tctcaaatgg tattctcacg ggatcccgag gctgaagaaa tagaagctga atatgctgca
 600
 ttagacaaac gaga
 614

<210> 5636

<211> 204

<212> PRT

<213> Homo sapiens

<400> 5636

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Val | Lys | Asp | Val | Ala | Glu | Val | Phe | Gln | Lys | Trp | Leu | Lys | Ile | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Lys | Lys | Cys | His | Cys | Leu | Ser | Glu | Lys | Thr | Lys | Gln | Asn | Met | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asn | Thr | Thr | Thr | Lys | Phe | Arg | Lys | Ala | Leu | Ile | Asn | Gly | Asp | Glu | Asn |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Leu | Ala | Cys | Gln | Ile | Tyr | Glu | Asn | Asn | Pro | Gln | Leu | Lys | Glu | Ser | Leu |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Asp | Pro | Asn | Thr | Ser | Tyr | Gly | Glu | Pro | Tyr | Gln | His | Asn | Thr | Pro | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| His | Tyr | Ala | Ala | Arg | His | Gly | Met | Asn | Lys | Ile | Leu | Gly | Asp | Asp | Phe |
| | | | | 85 | | | | 90 | | | | | 95 | | |
| Arg | Arg | Ala | Asp | Cys | Leu | Gln | Met | Ile | Leu | Lys | Trp | Lys | Gly | Ala | Lys |
| | | | 100 | | | | 105 | | | | | | 110 | | |
| Leu | Asp | Gln | Gly | Glu | Tyr | Glu | Arg | Ala | Ala | Ile | Asp | Ala | Val | Asp | Asn |
| | 115 | | | | | 120 | | | | | 125 | | | | |
| Lys | Lys | Asn | Thr | Pro | Leu | His | Tyr | Ala | Ala | Ala | Ser | Gly | Met | Lys | Ala |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Cys | Val | Glu | Lys | His | Gly | Gly | Asp | Leu | Phe | Ala | Glu | Asn | Glu | Asn | Lys |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Asp | Thr | Pro | Cys | Asp | Cys | Ala | Glu | Lys | Gln | His | His | Lys | Asp | Leu | Ala |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Leu | Asn | Leu | Glu | Ser | Gln | Met | Val | Phe | Ser | Arg | Asp | Pro | Glu | Ala | Glu |
| | 180 | | | | | 185 | | | | | | | 190 | | |
| Glu | Ile | Glu | Ala | Glu | Tyr | Ala | Ala | Leu | Asp | Lys | Arg | | | | |
| | 195 | | | | | 200 | | | | | | | | | |

<210> 5637

<211> 825

<212> DNA

<213> Homo sapiens

<400> 5637

acgcgtccga ggctcctcaa acccagggcc ccacctggca cgtggaggaa gaagagaagg
60
gcaggaggca ggtgcccagg tgggagcccc ctctgtgccc cctgggagtg tccccccgc
120
ccaggtactc agggccctgc cctcgtggcc ttgtccgctc gccgcgggtg gggctggcac
180
aaggcccggt ttggaggaag tggaggctcc caggagaaag gcagtggctg tgatcgaca
240
gccaggctc tgccctgcac tgccctggac cacgaggctg cccaccccag acaggtggga
300
cccccttccc gcatgcagac tctgagcagc agcttcctgt gacccccacc gcgtcctgct
360
cctcaggctc atgccctgcg ggaacagaag ccaagaccg gtagaaaatc caaggtgttt
420
aaatataaat aagagcgatt cccacagccc cacggtgctg gccagcctca caggtgccc
480
ctggttctgt gacccatccc aggcacacgc tcccctggct gggcgccctg ccagggctcc
540
cctgtggctg gcgtgtggag acacgtgggc ctttctccac gtgcccacga gggccgtagc
600
aggctccaag gaggcccagc cccggccagc ctgtgtggac cccgcgggcc tgcgcgcccc
660
ggagctgctg actgtgtcag agcccggctg cccagcgccc cggcgccctc cctccagctg
720
cccagcctgg gatccgtccg ctgtctgtct cctgaaccag ggagtctgac ccactcacag
780
ctcccatggg gtccgtgcag ccaaggcccc gcagccacac tcaact
825

<210> 5638

<211> 132

<212> PRT

<213> Homo sapiens

<400> 5638

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Cys | Gly | Asn | Arg | Ser | Gln | Asp | Pro | Val | Glu | Asn | Pro | Arg | Cys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Asn | Ile | Asn | Lys | Ser | Asp | Ser | His | Ser | Pro | Thr | Val | Leu | Ala | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Thr | Gly | Ala | Arg | Trp | Phe | Cys | Asp | Pro | Ser | Gln | Ala | His | Ala | Pro |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Ala | Gly | Arg | Leu | Ala | Arg | Ala | Pro | Leu | Trp | Leu | Ala | Cys | Gly | Asp |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Thr | Trp | Ala | Leu | Leu | His | Val | Pro | Thr | Arg | Ala | Val | Ala | Gly | Ser | Lys |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Glu | Ala | Gln | Pro | Arg | Pro | Ala | Cys | Val | Asp | Pro | Ala | Gly | Leu | Arg | Ala |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Pro | Glu | Leu | Leu | Thr | Val | Ser | Glu | Pro | Gly | Cys | Pro | Ala | Pro | Arg | Arg |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Pro | Pro | Ser | Ser | Cys | Pro | Ala | Trp | Asp | Pro | Ser | Ala | Val | Cys | Leu | Leu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Asn | Gln | Gly | Val | | | | | | | | | | | | |

130

<210> 5639

<211> 2433

<212> DNA

<213> Homo sapiens

<400> 5639

natagctaca aaataaaaaa aactaattca aacaaatgta cttattttaat ccaatatatc
60
ccaacaatta ttgcagcaca taatcaatat aaacattata tatatgaact atttgacact
120
atttgacatt tcttcttcca catccagtgt atctgacatt tagcgcacat ttgatttgca
180
ctcaccact ttgaggagct caattgccgc ttaagtccgt ggctagtggc tgccctaaag
240
ttcagcaccg ccacggagct ttgggtccac ccggactgta aaaaggaagc acttccgtta
300
gcatgaccgc gcctgaagta gcggcggaac ggaagtcgct tgtgtatgaa cgcagcggcg
360
gacctgtgag gggatccgac ttgccggcag aacttacgct gcgggacccc gggcactggt
420
gctgctgcgg gagactgtgg gctgtttagt gccatgcacc ctttacagtg tgcctccaa
480
gtgcagaggt ctctggggtg gggaccattg gcctctgtgt cttggctgtc gctgaggatg
540
tgcagggcac acagcagtct ctctagtacc atgtgtccca gtccagagag gcaggaggat
600
ggagctcgga aggatttcag ctccaggctg gctgctggac cgacttttca acatttttta
660
aaaagtgcct cagctcctca ggagaagctg tcttcagaag tggaagaccc acctccctat
720
ctcatgatgg atgaacttct tggaaggcag agaaaagtct acctcgagac ctatggctgc
780
cagatgaatg tgaatgacac agagatagcc tgggccatct tacagaagag tggctacctg
840
cggccagtaa cctccaaggc agatgtgatt ctccctgtca cgtgctctat cagggagaag
900
gctgagcaga ccactctgga ccgtttacat cagcttaaag ccttgaagac aaggcggccc
960
cgctcccggg ttctctctgag gattggaatt ctaggctgca tggctgagag gttgaaggag
1020
gagatttctca acagagagaa aatggtagat attttggctg gtccctgatgc ctaccgggac
1080
cttccccggc tgctggctgt tgctgagtcg ggccagcaag ctgccaacgt gctgctctct
1140
ctggacgaga cctatgctga tgtcatgccg gtccagacaa gcgccagtgc cacgtctgcc
1200
tttgtgtcaa tcatgcgagg ctgtgacaac atgtgtagct actgcattgt tcctttcacc
1260
cggggcaggg agaggagtcg gcctattgcc tccattctag aggaagtga gaagctttct
1320
gagcaggggc tgaaagaagt gacacttctt ggtcagaatg ttaatagttt tcgggacaat
1380

tcggaggtcc agttcaacag tgcagtgcct accaatctca gtcgtggctt taccaccaac
 1440
 tataaaacca agcaaggagg acttcgtttt gctcatcttc tggatcaggt ctccagagta
 1500
 gatcctgaaa tgaggatccg ttttacctct cccaccccca aggattttcc tgatgagggt
 1560
 ctgcagctga ttcattgagag agataacatc tgtaaacaga tccacctgcc agcccagagt
 1620
 ggaagcagcc gtgtgttgga ggccatgcgg aggggatatt caagagaagc ttatgtggag
 1680
 ttagttcacc atattagaga atctattcca ggtgtgagcc tcagcagcga tttcattgct
 1740
 ggcttttgtg gtgagacgga ggaagatcac gtccagacag tctctttgct ccgggaagtt
 1800
 cagtacaaca tgggcttcct ctttgcctac agcatgagac agaagacacg ggcatatcat
 1860
 aggtgaagg atgatgtccc ggaagaggta aaattaaggc gtttggagga actcatcact
 1920
 atcttccgag aagaagcaac aaaagccaat cagacctctg tgggctgtac ccagttgggtg
 1980
 ctagtgaag ggctcagtaa acgctctgcc actgacctgt gtggcaggaa tgatggaaac
 2040
 cttaaggatga tcttccctga tgcagagatg gaggatgtca ataaccctgg gctcagggtc
 2100
 agagcccagc ctggggacta tgtgctgggtg aagatcacn ntcagccagt tctcagacac
 2160
 ttaggggaca tgttctctgc aggaccactc tgagggactc ttctgcatat tgctgacctg
 2220
 agaggatggc ctccagagctg acttgggcaa tcctcccca caggaagggg agacattgcc
 2280
 tgccactgag gaaacaggtc atgaagggtg agataagctg caagggggcga agcaacttta
 2340
 tgtcagtgga aaacgtgtct ctttaaagct gctatgtgaa cagcttttac agtcattaaa
 2400
 tttacctaaa ctaagggtta aaaaaaaaaa aaa
 2433

<210> 5640

<211> 540

<212> PRT

<213> Homo sapiens

<400> 5640

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Cys | Pro | Ser | Pro | Glu | Arg | Gln | Glu | Asp | Gly | Ala | Arg | Lys | Asp | Phe |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Ser | Ser | Arg | Leu | Ala | Ala | Gly | Pro | Thr | Phe | Gln | His | Phe | Leu | Lys | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Ser | Ala | Pro | Gln | Glu | Lys | Leu | Ser | Ser | Glu | Val | Glu | Asp | Pro | Pro |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Pro | Tyr | Leu | Met | Met | Asp | Glu | Leu | Leu | Gly | Arg | Gln | Arg | Lys | Val | Tyr |
| | 50 | | | | 55 | | | | 60 | | | | | | |
| Leu | Glu | Thr | Tyr | Gly | Cys | Gln | Met | Asn | Val | Asn | Asp | Thr | Glu | Ile | Ala |
| 65 | | | | 70 | | | | 75 | | | | | 80 | | |
| Trp | Ser | Ile | Leu | Gln | Lys | Ser | Gly | Tyr | Leu | Arg | Pro | Val | Thr | Ser | Lys |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|----|--|--|--|--|--|
| | | | | | | | | | | 85 | | | | | 90 | | | | | 95 | | | | | |
| Ala | Asp | Val | Ile | Leu | Leu | Val | Thr | Cys | Ser | Ile | Arg | Glu | Lys | Ala | Glu | | | | | | | | | | |
| | | | | 100 | | | | | | 105 | | | | | | 110 | | | | | | | | | |
| Gln | Thr | Ile | Trp | Asn | Arg | Leu | His | Gln | Leu | Lys | Ala | Leu | Lys | Thr | Arg | | | | | | | | | | |
| | | | | 115 | | | | | | 120 | | | | | | 125 | | | | | | | | | |
| Arg | Pro | Arg | Ser | Arg | Val | Pro | Leu | Arg | Ile | Gly | Ile | Leu | Gly | Cys | Met | | | | | | | | | | |
| | | | | 130 | | | | | | 135 | | | | | | 140 | | | | | | | | | |
| Ala | Glu | Arg | Leu | Lys | Glu | Glu | Ile | Leu | Asn | Arg | Glu | Lys | Met | Val | Asp | | | | | | | | | | |
| | | | | 145 | | | | | | 150 | | | | | | 155 | | | | | | | | | |
| Ile | Leu | Ala | Gly | Pro | Asp | Ala | Tyr | Arg | Asp | Leu | Pro | Arg | Leu | Leu | Ala | | | | | | | | | | |
| | | | | 165 | | | | | | 170 | | | | | | 175 | | | | | | | | | |
| Val | Ala | Glu | Ser | Gly | Gln | Gln | Ala | Ala | Asn | Val | Leu | Leu | Ser | Leu | Asp | | | | | | | | | | |
| | | | | 180 | | | | | | 185 | | | | | | 190 | | | | | | | | | |
| Glu | Thr | Tyr | Ala | Asp | Val | Met | Pro | Val | Gln | Thr | Ser | Ala | Ser | Ala | Thr | | | | | | | | | | |
| | | | | 195 | | | | | | 200 | | | | | | 205 | | | | | | | | | |
| Ser | Ala | Phe | Val | Ser | Ile | Met | Arg | Gly | Cys | Asp | Asn | Met | Cys | Ser | Tyr | | | | | | | | | | |
| | | | | 210 | | | | | | 215 | | | | | | 220 | | | | | | | | | |
| Cys | Ile | Val | Pro | Phe | Thr | Arg | Gly | Arg | Glu | Arg | Ser | Arg | Pro | Ile | Ala | | | | | | | | | | |
| | | | | 225 | | | | | | 230 | | | | | | 235 | | | | | | | | | |
| Ser | Ile | Leu | Glu | Glu | Val | Lys | Lys | Leu | Ser | Glu | Gln | Gly | Leu | Lys | Glu | | | | | | | | | | |
| | | | | 245 | | | | | | 250 | | | | | | 255 | | | | | | | | | |
| Val | Thr | Leu | Leu | Gly | Gln | Asn | Val | Asn | Ser | Phe | Arg | Asp | Asn | Ser | Glu | | | | | | | | | | |
| | | | | 260 | | | | | | 265 | | | | | | 270 | | | | | | | | | |
| Val | Gln | Phe | Asn | Ser | Ala | Val | Pro | Thr | Asn | Leu | Ser | Arg | Gly | Phe | Thr | | | | | | | | | | |
| | | | | 275 | | | | | | 280 | | | | | | 285 | | | | | | | | | |
| Thr | Asn | Tyr | Lys | Thr | Lys | Gln | Gly | Gly | Leu | Arg | Phe | Ala | His | Leu | Leu | | | | | | | | | | |
| | | | | 290 | | | | | | 295 | | | | | | 300 | | | | | | | | | |
| Asp | Gln | Val | Ser | Arg | Val | Asp | Pro | Glu | Met | Arg | Ile | Arg | Phe | Thr | Ser | | | | | | | | | | |
| | | | | 305 | | | | | | 310 | | | | | | 315 | | | | | | | | | |
| Pro | His | Pro | Lys | Asp | Phe | Pro | Asp | Glu | Val | Leu | Gln | Leu | Ile | His | Glu | | | | | | | | | | |
| | | | | 325 | | | | | | 330 | | | | | | 335 | | | | | | | | | |
| Arg | Asp | Asn | Ile | Cys | Lys | Gln | Ile | His | Leu | Pro | Ala | Gln | Ser | Gly | Ser | | | | | | | | | | |
| | | | | 340 | | | | | | 345 | | | | | | 350 | | | | | | | | | |
| Ser | Arg | Val | Leu | Glu | Ala | Met | Arg | Arg | Gly | Tyr | Ser | Arg | Glu | Ala | Tyr | | | | | | | | | | |
| | | | | 355 | | | | | | 360 | | | | | | 365 | | | | | | | | | |
| Val | Glu | Leu | Val | His | His | Ile | Arg | Glu | Ser | Ile | Pro | Gly | Val | Ser | Leu | | | | | | | | | | |
| | | | | 370 | | | | | | 375 | | | | | | 380 | | | | | | | | | |
| Ser | Ser | Asp | Phe | Ile | Ala | Gly | Phe | Cys | Gly | Glu | Thr | Glu | Glu | Asp | His | | | | | | | | | | |
| | | | | 385 | | | | | | 390 | | | | | | 395 | | | | | | | | | |
| Val | Gln | Thr | Val | Ser | Leu | Leu | Arg | Glu | Val | Gln | Tyr | Asn | Met | Gly | Phe | | | | | | | | | | |
| | | | | 405 | | | | | | 410 | | | | | | 415 | | | | | | | | | |
| Leu | Phe | Ala | Tyr | Ser | Met | Arg | Gln | Lys | Thr | Arg | Ala | Tyr | His | Arg | Leu | | | | | | | | | | |
| | | | | 420 | | | | | | 425 | | | | | | 430 | | | | | | | | | |
| Lys | | | | | | | | | | | | | | | | | | | | | | | | | |

515 520 525
 Arg His Leu Gly Asp Met Phe Ser Ala Gly Pro Leu
 530 535 540

<210> 5641

<211> 293

<212> DNA

<213> Homo sapiens

<400> 5641

gcgtcgcata cagccaacct gtgcgtgctg ctgtaccgca gcggcgtaa agtgggtcacc
 60
 ttctgtggcc acgcgtccaa aaccaatcag gtcaactcgg gcggtgtgct gctgagggttg
 120
 cagggtgggag aggaggtgtg gctggctggg gcacccctgg catccctgga gagccaggtg
 180
 aggagggcag atacaagcag aaattccagt cagtgttcac ggtcactcgg cagaccacc
 240
 agccccctgc acccaacagc ctgatcagat tcaacgcggg cctcaccaac ccg
 293

<210> 5642

<211> 87

<212> PRT

<213> Homo sapiens

<400> 5642

Ala Ser His Thr Ala Asn Leu Cys Val Leu Leu Tyr Arg Ser Gly Val
 1 5 10 15
 Lys Val Val Thr Phe Cys Gly His Ala Ser Lys Thr Asn Gln Val Asn
 20 25 30
 Ser Gly Gly Val Leu Leu Arg Leu Gln Val Gly Glu Glu Val Trp Leu
 35 40 45
 Ala Gly Ala Pro Leu Ala Ser Leu Glu Ser Gln Val Arg Arg Ala Asp
 50 55 60
 Thr Ser Arg Asn Ser Ser Gln Cys Ser Arg Ser Leu Gly Arg Pro Thr
 65 70 75 80
 Ser Pro Leu His Pro Thr Ala
 85

<210> 5643

<211> 1218

<212> DNA

<213> Homo sapiens

<400> 5643

nnacgcgtga ggagcctgag gcggcggcgg ggggtggctcc gcgcgcggtg gtctcggggg
 60
 caaaataaca tggcagccag acgaattaca caggagactt ttgatgctgt attacaagaa
 120
 aaagccaaac gatatcacat ggatgccagt ggtgaggctg taagcgaaac tcttcagttt
 180
 aaagctcaag atctcttaag ggcagtccca agatccagag cagagatgta tgatgacgtc
 240

cacagcgatg gcagatactc cctcagtgga tctgtagctc actctagaga tgccggaaga
 300
 gaaggcctga gaagtgcgt atttccaggg ccttccttca gatcaagcaa cccttccatc
 360
 agtgatgaca gctactttcg caaagaatgt ggccgggacg tggaattttc tcaactctgat
 420
 tctcgggacc aggtcattgg ccaccgaaa ttggggcatt tccgtttctca ggactggaaa
 480
 tttgcgctcc gtggttcttg ggaacaagac tttggccatc cagttttctca agagtcctct
 540
 tggtcacagg agtatagttt tgggtccctct gcagtttttg gggacttttg atcttccagg
 600
 ctgattgaga aagagtgttt ggagaaggag agtcgggatt atgacgtgga ccatactggg
 660
 gaggctgact ctgtgcttag gggcagcagt caagtccagg ccagaggctg agctctaaac
 720
 atcgttgacc aggaaggttc cctcctagga aagggggaga ctcagggcct gctcacagct
 780
 aaggggggtg ttgggaaact tgtcacattg agaaatgtga gcacaaaaaa aatacccacc
 840
 gtgaatcgta ttactcccaa aactcagggc actaaccaaa tccagaaaaa cactccaagt
 900
 cctgatgtga ccctggggac aaaccaggg acagaagata tccagttccc cattcagaag
 960
 atccctctgg ggctggatct gaagaatctt cggtcccca gaagaaagat gagctttgac
 1020
 atcatagata agtctgatgt tttttcaaga tttgggatag aaataatcaa atgggcagga
 1080
 ttccacacca taaaattaga ttattaaatt tttcccaaac ttttccagac tctctttgaa
 1140
 cttgaaacag aaacctgtgc taaaatgctt gcctcattca aatgttcctt aaaaccagag
 1200
 cacagagatt tttgcttt
 1218

<210> 5644

<211> 202

<212> PRT

<213> Homo sapiens

<400> 5644

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Glu | Gln | Asp | Phe | Gly | His | Pro | Val | Ser | Gln | Glu | Ser | Ser | Trp | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Glu | Tyr | Ser | Phe | Gly | Pro | Ser | Ala | Val | Leu | Gly | Asp | Phe | Gly | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Arg | Leu | Ile | Glu | Lys | Glu | Cys | Leu | Glu | Lys | Glu | Ser | Arg | Asp | Tyr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asp | Val | Asp | His | Pro | Gly | Glu | Ala | Asp | Ser | Val | Leu | Arg | Gly | Ser | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gln | Val | Gln | Ala | Arg | Gly | Arg | Ala | Leu | Asn | Ile | Val | Asp | Gln | Glu | Gly |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Ser | Leu | Leu | Gly | Lys | Gly | Glu | Thr | Gln | Gly | Leu | Leu | Thr | Ala | Lys | Gly |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Gly | Val | Gly | Lys | Leu | Val | Thr | Leu | Arg | Asn | Val | Ser | Thr | Lys | Lys | Ile |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| | | | 100 | | | | | 105 | | | | | 110 | | | | |
| Pro | Thr | Val | Asn | Arg | Ile | Thr | Pro | Lys | Thr | Gln | Gly | Thr | Asn | Gln | Ile | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | |
| Gln | Lys | Asn | Thr | Pro | Ser | Pro | Asp | Val | Thr | Leu | Gly | Thr | Asn | Pro | Gly | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | |
| Thr | Glu | Asp | Ile | Gln | Phe | Pro | Ile | Gln | Lys | Ile | Pro | Leu | Gly | Leu | Asp | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | |
| Leu | Lys | Asn | Leu | Arg | Leu | Pro | Arg | Arg | Lys | Met | Ser | Phe | Asp | Ile | Ile | | |
| | | | 165 | | | | | 170 | | | | | | 175 | | | |
| Asp | Lys | Ser | Asp | Val | Phe | Ser | Arg | Phe | Gly | Ile | Glu | Ile | Ile | Lys | Trp | | |
| | | 180 | | | | | 185 | | | | | | 190 | | | | |
| Ala | Gly | Phe | His | Thr | Ile | Lys | Leu | Asp | Tyr | | | | | | | | |
| | 195 | | | | | | 200 | | | | | | | | | | |

<210> 5645

<211> 156

<212> DNA

<213> Homo sapiens

<400> 5645

ccacgtccat cccgaagaag gaactgcagg tgggcgggtt ttggcctggc acagagatgt
60

cctcagatca gcttccccctc tcccaggcaa gaggacacga gcactggcaa gttcacctgc
120

aaagtccccg gcctctacta ctttgtctac cacgcg
156

<210> 5646

<211> 52

<212> PRT

<213> Homo sapiens

<400> 5646

Pro Arg Pro Ser Arg Arg Arg Asn Cys Arg Trp Ala Val Phe Gly Leu
1 5 10 15

Ala Gln Arg Cys Pro Gln Ile Ser Phe Pro Ser Pro Arg Gln Glu Asp
20 25 30

Thr Ser Thr Gly Lys Phe Thr Cys Lys Val Pro Gly Leu Tyr Tyr Phe
35 40 45

Val Tyr His Ala
50

<210> 5647

<211> 150

<212> DNA

<213> Homo sapiens

<400> 5647

cccatggggc cgggcaccct ggcattccca ggggggtccca tggggccatt tttcccagga
60

aggcccaagg gggagccagg aatcccagcc attcccggga tccgaggacc caaagggcag
120

aagggagaac cgggcttacc cggccatccn
150

<210> 5648
 <211> 50
 <212> PRT
 <213> Homo sapiens

<400> 5648
 Pro Met Gly Pro Gly Thr Leu Ala Phe Pro Gly Gly Pro Met Gly Pro
 1 5 10 15
 Phe Phe Pro Gly Arg Pro Lys Gly Glu Pro Gly Ile Pro Ala Ile Pro
 20 25 30
 Gly Ile Arg Gly Pro Lys Gly Gln Lys Gly Glu Pro Gly Leu Pro Gly
 35 40 45
 His Pro
 50

<210> 5649
 <211> 345
 <212> DNA
 <213> Homo sapiens

<400> 5649
 ngggacctgc aagcccgcgg ccagacctgc cagcgcgccg gccatggctg tcgccgccgc
 60
 aaccgcctgg tccctcggat cgcgcccagc ccagactcgg actcggacac agactcggag
 120
 gacccgagtc tccggcgag cgcgggcggc ttgctccgct cgcagggtcat ccacagcggg
 180
 cacttcatgg tgtcgtcgcc gcacagcgac tcgctgcccc ggcgggcgca ccaggagggg
 240
 ccgtggggcc ctccgacttc gggccgcgca gtatcgaccc cacactcaca cgcctcttcg
 300
 agtgcttgag cctggcctac agtggcaagc tggggctctcc caagt
 345

<210> 5650
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 5650
 Met Ala Val Ala Ala Ala Thr Ala Trp Ser Leu Gly Ser Arg Pro Ala
 1 5 10 15
 Gln Thr Arg Thr Arg Thr Gln Thr Arg Arg Thr Arg Val Ser Gly Ala
 20 25 30
 Ala Arg Ala Ala Cys Ser Ala Arg Arg Ser Ser Thr Ala Val Thr Ser
 35 40 45
 Trp Cys Arg Arg Arg Thr Ala Thr Arg Cys Pro Gly Gly Ala Thr Arg
 50 55 60
 Arg Val Arg Gly Ala Leu Arg Leu Arg Ala Ala Gln Tyr Arg Pro His
 65 70 75 80
 Thr His Thr Pro Leu Arg Val Leu Glu Pro Gly Leu Gln Trp Gln Ala
 85 90 95
 Gly Val Ser Gln

100

<210> 5651
 <211> 615
 <212> DNA
 <213> Homo sapiens

<400> 5651
 ctcgaggaat attgggtctt ctgcgcggcc gtagagctcc gccaaagtgcg cctgcgcgga
 60
 ggagaagtgg cgtcgagtcg ggccgggcag tagaggaaat tgcggtagtg accctcgggc
 120
 ctcgccatga agagccgctt tagcaccatt gacctccgcg ccgtactcgc ggagctgaat
 180
 gctagcttgc taggaatgag agtaaacaat gtttatgatg tggataataa gacatacctt
 240
 attcgtcttc aaaaaccgga ctttaaagct acacttttac ttgaatctgg catacaaatt
 300
 catacaacag aatttgagtg gcctaagaat atgatgccgt ctagttttgc catgaagtgc
 360
 cgaaaacatt tgaagagtcg gagattagtc agtgcaaaac agcttggtgt ggatagaatt
 420
 gtagattttc aatttggaag tgatgaagct gcttaccatt taatcattga gctctatgat
 480
 agggggaaca ttgttcttac agattatgag tacgtaattt taaatattct aagggttcga
 540
 actgatgagg cagatgatgt taaatttgct gtctgtgaac gctatccact tgatcatgct
 600
 agagctgctg aacct
 615

<210> 5652
 <211> 163
 <212> PRT
 <213> Homo sapiens

<400> 5652
 Met Lys Ser Arg Phe Ser Thr Ile Asp Leu Arg Ala Val Leu Ala Glu
 1 5 10 15
 Leu Asn Ala Ser Leu Leu Gly Met Arg Val Asn Asn Val Tyr Asp Val
 20 25 30
 Asp Asn Lys Thr Tyr Leu Ile Arg Leu Gln Lys Pro Asp Phe Lys Ala
 35 40 45
 Thr Leu Leu Leu Glu Ser Gly Ile Gln Ile His Thr Thr Glu Phe Glu
 50 55 60
 Trp Pro Lys Asn Met Met Pro Ser Ser Phe Ala Met Lys Cys Arg Lys
 65 70 75 80
 His Leu Lys Ser Arg Arg Leu Val Ser Ala Lys Gln Leu Gly Val Asp
 85 90 95
 Arg Ile Val Asp Phe Gln Phe Gly Ser Asp Glu Ala Ala Tyr His Leu
 100 105 110
 Ile Ile Glu Leu Tyr Asp Arg Gly Asn Ile Val Leu Thr Asp Tyr Glu
 115 120 125
 Tyr Val Ile Leu Asn Ile Leu Arg Phe Arg Thr Asp Glu Ala Asp Asp

| | | |
|---|-----|-----|
| 130 | 135 | 140 |
| Val Lys Phe Ala Val Arg Glu Arg Tyr Pro Leu Asp His Ala Arg Ala | | |
| 145 | 150 | 155 |
| Ala Glu Pro | | 160 |

<210> 5653
 <211> 1439
 <212> DNA
 <213> Homo sapiens

<400> 5653
 nnacgcgtcg catacagcca acctgtgcgt gctgctgtac cgcagcggcg tcaaagtggg
 60
 caccttctgt ggccacacgt ccaaaaccaa tcagggtcaac tcgggcggtg tgctgctgag
 120
 gttgcagggtg aacttgccag tgctcgtgtc ataatctccc tcggggttgg tgaggaccgc
 180
 gttgaatctg atcaggctgt tgggtgcagg gggctgggtg gtctgccgag tgaccactca
 240
 gacaccgtgt cctcttgcct gggagagggg aagcagatct gaggacatct ctgtgccagg
 300
 ccagaaaccg cccacctgca ggtgaggccc ggacccctgc ccagttcctt ctccgggatg
 360
 gacgtggggc ccagctccct gccccacctt gggctgaagc tgctgctgct cctgctgctg
 420
 ctgccccctca ggggccaagc caacacaggc tgctacggga tcccagggat gcccggcctg
 480
 cccggggcac cagggaagga tgggtacgac ggactgccgg ggcccaaggg ggagccagga
 540
 atcccagcca ttcccgggat ccgaggacct aaagggcaga agggagaacc cggcttacct
 600
 ggccatcctg ggaaaaatgg ccccatggga cccctggga tgccaggggt gcccggcccc
 660
 atgggcatcc ctggagagcc aggtgaggag ggcagataca agcagaaatt ccagtcatg
 720
 ttcacggtca ctgggcagac ccaccagccc cctgcaccca acagcctgat cagattcaac
 780
 gcggtcctca ccaaccgcga gggagattat gacacgagca ctggcaagtt cacctgcaaa
 840
 gtccccggcc tctactactt tgtctaccac gcgtcgcata cagccaacct gtgctgctg
 900
 ctgtaccgca gcggcgtcaa agtgggtcacc ttctgtggcc acacgtccaa aaccaatcag
 960
 gtcaactcgg gcggtgtgct gctgaggttg cagggtggcg aggaggtgtg gctggctgtc
 1020
 aatgactact acgacatggg gggcatccag ggctctgaca gcgtcttctc cggcttctctg
 1080
 ctcttccccg actagggcgg gcagatgcgc tcgagcccca cgggccttcc acctccctca
 1140
 gcttctctgca tggaccacc ttactggcca gtctgcatcc ttgcctagac cattctcccc
 1200
 accagatgga cttctcctcc agggagccca cctgaccca cccccactgc accccctccc
 1260

catgggttct ctccttcctc tgaacttctt taggagtcac tgcttgtgtg gttcctggga
 1320
 cacttaacca atgccttctg gtactgccat tctttttttt ttttttcaag tattggaagg
 1380
 ggtggggaga tatataaata aatcatgaaa tcaataaaaa aaaaaaaaaa aaaaaaaaaa
 1439

<210> 5654
 <211> 245
 <212> PRT
 <213> Homo sapiens

<400> 5654
 Met Asp Val Gly Pro Ser Ser Leu Pro His Leu Gly Leu Lys Leu Leu
 1 5 10 15
 Leu Leu Leu Leu Leu Leu Pro Leu Arg Gly Gln Ala Asn Thr Gly Cys
 20 25 30
 Tyr Gly Ile Pro Gly Met Pro Gly Leu Pro Gly Ala Pro Gly Lys Asp
 35 40 45
 Gly Tyr Asp Gly Leu Pro Gly Pro Lys Gly Glu Pro Gly Ile Pro Ala
 50 55 60
 Ile Pro Gly Ile Arg Gly Pro Lys Gly Gln Lys Gly Glu Pro Gly Leu
 65 70 75 80
 Pro Gly His Pro Gly Lys Asn Gly Pro Met Gly Pro Pro Gly Met Pro
 85 90 95
 Gly Val Pro Gly Pro Met Gly Ile Pro Gly Glu Pro Gly Glu Glu Gly
 100 105 110
 Arg Tyr Lys Gln Lys Phe Gln Ser Val Phe Thr Val Thr Arg Gln Thr
 115 120 125
 His Gln Pro Pro Ala Pro Asn Ser Leu Ile Arg Phe Asn Ala Val Leu
 130 135 140
 Thr Asn Pro Gln Gly Asp Tyr Asp Thr Ser Thr Gly Lys Phe Thr Cys
 145 150 155 160
 Lys Val Pro Gly Leu Tyr Tyr Phe Val Tyr His Ala Ser His Thr Ala
 165 170 175
 Asn Leu Cys Val Leu Leu Tyr Arg Ser Gly Val Lys Val Val Thr Phe
 180 185 190
 Cys Gly His Thr Ser Lys Thr Asn Gln Val Asn Ser Gly Gly Val Leu
 195 200 205
 Leu Arg Leu Gln Val Gly Glu Glu Val Trp Leu Ala Val Asn Asp Tyr
 210 215 220
 Tyr Asp Met Val Gly Ile Gln Gly Ser Asp Ser Val Phe Ser Gly Phe
 225 230 235 240
 Leu Leu Phe Pro Asp
 245

<210> 5655
 <211> 3810
 <212> DNA
 <213> Homo sapiens

<400> 5655
 gatctgttgg aggaggatga gctgctagag cagaagtttc aggaggcggt gggccaggca
 60

gggnngccat ctccatcanc ctccaaggct gagctggcag aggtgaggcg agaatgggcc
120
aagtacatgg aagtccatga gaaggcctcc ttcaccaata gtgagctgca ccgtgccatg
180
aacctgcacg tcggcaacct gcgcctgctc agcggggccgc ttgaccaggc cggggctgcc
240
ctgcccacac cggccctctc cccagaggac aaggccgtgc tgcaaacct aaagcgcac
300
ctggctaagg tgcaggagat gcgggaccag cgcggtgtccc tggagcagca gctgcgtgag
360
cttatccaga aagatgacat cactgcctcg ctggtcacca cagaccactc agagatgaag
420
aagttgttcg aggagcagct gaaaaagtat gaccagctga aggtgtacct ggagcagaac
480
ctggccgccc aggaccgtgt cctctgtgca ctgacagagg ccaacgtgca gtacgcagcc
540
gtgcggcggg tactcagcga cttggaccaa aagtggaact ccacgtgca gaccctggtg
600
gcctcgtatg aagcctatga ggacctgatg aagaagtcgc aggagggcag ggacttctac
660
gcagatctgg agagcaaggc ggctgctctg ctggagcgcg cgcagtccac ctgccaggcc
720
cgcgaggctg cccgccagca gctcctggac agggagctga agaagaagcc gccgccacgg
780
cccacagccc caaagccgct gctgccccgc agggaggaga gtgaggcagt ggaagcagga
840
gacccccctg aggagctgcg cagcctcccc cctgacatgg tggttggccc acgactgctt
900
gacaccttcc tgggaagtgc caccctgctc cactttctc ccagccccctt cccagctcc
960
acaggcccag gacccccacta tctctcaggc cccttgcccc ctggtacctt ctggggcccc
1020
accagctga tacagcccag ggccccaggc ccccatgcaa tgcccgtagc acctgggctt
1080
gcctctacc cagccccctg ctacacaccg gagctgggccc ttgtgccccg atcctcccca
1140
cagcatggcg tggtagagcag tcctatgtg ggggtagggc cggccccacc agttgcaggc
1200
ctccccctcg cccacctcc tcaattctca ggccccgagt tggccatggc ggttcggcca
1260
gccaccacca cagtagatag catccaggcg cccatcccca gccacacagc cccacggcca
1320
aaccacccc ctgctctctc cccgcccctg ttcctgtgct cccacccgca gccactgccc
1380
acgcttaca cctaccctgc aggggctaag caaccatcc cagcacagca ccacttctct
1440
tctgggatcc ccacagggtt tccagcccca aggattgggc cccagcccca gccccatct
1500
cagccccatc cttcacaagc gtttgggctt cagccccccac agcagccccct tccactccag
1560
catccacatc tcttcccacc ccaggcccca ggactcctac cccacaatc cccctacccc
1620
tatgcccctc agcctggggc cctggggcag ccgccacccc cctacacac ccagctctac
1680

ccaggteccg ctcaagaccc tctgccagcc cactcagggg ctctgccttt cccagccct
1740
gggccccctc agcctcccca tccccactg gcatatggtc ctgccccctc taccagaccc
1800
atggggcccc aggcagcccc tcttaccatt cgagggccct cgtctgctgg ccagtccacc
1860
cctagtcccc acctggtgcc ttcacctgcc ccatctccag ggcttggctc ggtacccct
1920
cgccccccag cagcagaacc acccccttgc ctgcgccgag gcgcccagc tgcagacctg
1980
ctctcctcca gcccgagag ccagcatggc ggactcagt ctctggggg tgggcagccc
2040
ctgctgcagc ccaccaaggt ggatgcagct gagggtcgtc ggccgcaggc cctgcggctg
2100
attgagcggg acccctatga gcatcctgag aggtgcggc agttgcagca ggagctggag
2160
gcctttcggg gtcagctggg ggatgtggga gctctggaca ctgtctggcg agagctgcaa
2220
gatgcgcagg aacatgatgc ccgaggccgt tccatcgcca ttgcccgtg ctactcactg
2280
aagaaccggc accaggatgt catgcctat gacagtaacc gtgtggtgct gcgctcaggc
2340
aaggatgact acatcaatgc cagctgcgtg gaggggctct cccatactg cccccgcta
2400
gtggcaacct agggccact gcctggcaca gctgctgact tctggctcat ggtccatgag
2460
cagaaagtgt cagtcattgt catgctggtt tctgaggctg agatggagaa gcaaaaagtg
2520
gcacgctact tccccaccga gaggggccag cccatgggtg acggtgcctt gagcctggca
2580
ttgagcagcg tccgcagcac cgaaacccat gtggagcgcg tgctgagcct gcagttccga
2640
gaccagagcc tcaagcgctc tcttgtgcac ctgcacttcc ccacttggcc tgagttaggc
2700
ctgcccgaca gcccagcaa ccttctgcgc ttcattccagg aggtgcacgc acattacctg
2760
catcagcggc cgctgcacac gcccatcatt gtgcactgca gctctggtgt gggccgcacg
2820
ggagcctttg cactgctcta tgcagctgtg caggagggtg aggtgggaa cggaatccct
2880
gagctgcctc agctggtgcg gcgcatgcgg cagcagagaa agcacatgct gcaggagaag
2940
ctgcacctca ggnttctgct atgaggcagt ggtgagacac gtggagcagg tcctgcagcg
3000
ccatggtgtg cctcctccat gcaaaccctt ggccagtgca agcatcagcc agaagaacca
3060
ccttcctcag gactcccagg acctggtcct cgggtgggat gtgcccata gctccatcca
3120
ggccaccatt gccaagctca gattcggcct cctggggggg tggagtcccc ggttgccagc
3180
ttgccaggcc ctgcagagcc cccaggcctc ccgccagcca gcctcccaga gtctacccca
3240
atcccatctt cctccccacc cccctttcc tccccactac ctgaggctcc ccagcctaag
3300

gaggagccgc cagtgcctga agccccagc tcggggcccc cctcctctc cctggaattg
 3360
 ctggcctcct tgaccccaaga ggccttctcc ctggacagct ccctgcgggg caaacagcgg
 3420
 atgagcaagc ataactttct gcaggcccat aacgggcaag ggctgcgggc caccggcccc
 3480
 tctgacgacc ccctcagcct tctggatcca ctctggacac tcaacaagac ctgaacaggt
 3540
 tttgcctacc tggtccttac actacatcat catcatctca tgcccacctg cccacaccca
 3600
 gcagagcttc tcagtgggca cagtctctta ctcccatttc tgctgccttt ggcctgcct
 3660
 ggccccagcct gcacccctgt ggggtggaaa tgtactgcag gctctgggtc aggttctgct
 3720
 cctttatggg acccgacatt ttccagctct ttgctattga aataataaac caccctgttc
 3780
 tgtggcccggt aaaaaaaaaa aaaaaaaaaa
 3810

<210> 5656

<211> 987

<212> PRT

<213> Homo sapiens

<400> 5656

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Leu | Leu | Glu | Glu | Asp | Glu | Leu | Leu | Glu | Gln | Lys | Phe | Gln | Glu | Ala |
| 1 | | | 5 | | | | | | 10 | | | | | 15 | |
| Val | Gly | Gln | Ala | Gly | Xaa | Pro | Ser | Pro | Ser | Xaa | Ser | Lys | Ala | Glu | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Glu | Val | Arg | Arg | Glu | Trp | Ala | Lys | Tyr | Met | Glu | Val | His | Glu | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Ser | Phe | Thr | Asn | Ser | Glu | Leu | His | Arg | Ala | Met | Asn | Leu | His | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Asn | Leu | Arg | Leu | Leu | Ser | Gly | Pro | Leu | Asp | Gln | Val | Arg | Ala | Ala |
| 65 | | | | 70 | | | | | 75 | | | | | | 80 |
| Leu | Pro | Thr | Pro | Ala | Leu | Ser | Pro | Glu | Asp | Lys | Ala | Val | Leu | Gln | Asn |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Leu | Lys | Arg | Ile | Leu | Ala | Lys | Val | Gln | Glu | Met | Arg | Asp | Gln | Arg | Val |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ser | Leu | Glu | Gln | Gln | Leu | Arg | Glu | Leu | Ile | Gln | Lys | Asp | Asp | Ile | Thr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ala | Ser | Leu | Val | Thr | Thr | Asp | His | Ser | Glu | Met | Lys | Lys | Leu | Phe | Glu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Glu | Gln | Leu | Lys | Lys | Tyr | Asp | Gln | Leu | Lys | Val | Tyr | Leu | Glu | Gln | Asn |
| 145 | | | | 150 | | | | | 155 | | | | | | 160 |
| Leu | Ala | Ala | Gln | Asp | Arg | Val | Leu | Cys | Ala | Leu | Thr | Glu | Ala | Asn | Val |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Gln | Tyr | Ala | Ala | Val | Arg | Arg | Val | Leu | Ser | Asp | Leu | Asp | Gln | Lys | Trp |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Asn | Ser | Thr | Leu | Gln | Thr | Leu | Val | Ala | Ser | Tyr | Glu | Ala | Tyr | Glu | Asp |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Leu | Met | Lys | Lys | Ser | Gln | Glu | Gly | Arg | Asp | Phe | Tyr | Ala | Asp | Leu | Glu |
| | 210 | | | | 215 | | | | | | 220 | | | | |
| Ser | Lys | Val | Ala | Ala | Leu | Leu | Glu | Arg | Thr | Gln | Ser | Thr | Cys | Gln | Ala |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Arg | Glu | Ala | Ala | Arg | Gln | Gln | Leu | Leu | Asp | Arg | Glu | Leu | Lys | Lys | Lys |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Pro | Pro | Pro | Arg | Pro | Thr | Ala | Pro | Lys | Pro | Leu | Leu | Pro | Arg | Arg | Glu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Glu | Ser | Glu | Ala | Val | Glu | Ala | Gly | Asp | Pro | Pro | Glu | Glu | Leu | Arg | Ser |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Leu | Pro | Pro | Asp | Met | Val | Ala | Gly | Pro | Arg | Leu | Pro | Asp | Thr | Phe | Leu |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Gly | Ser | Ala | Thr | Pro | Leu | His | Phe | Pro | Pro | Ser | Pro | Phe | Pro | Ser | Ser |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Thr | Gly | Pro | Gly | Pro | His | Tyr | Leu | Ser | Gly | Pro | Leu | Pro | Pro | Gly | Thr |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Tyr | Ser | Gly | Pro | Thr | Gln | Leu | Ile | Gln | Pro | Arg | Ala | Pro | Gly | Pro | His |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Ala | Met | Pro | Val | Ala | Pro | Gly | Pro | Ala | Leu | Tyr | Pro | Ala | Pro | Ala | Tyr |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Thr | Pro | Glu | Leu | Gly | Leu | Val | Pro | Arg | Ser | Ser | Pro | Gln | His | Gly | Val |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Val | Ser | Ser | Pro | Tyr | Val | Gly | Val | Gly | Pro | Ala | Pro | Pro | Val | Ala | Gly |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Leu | Pro | Ser | Ala | Pro | Pro | Gln | Phe | Ser | Gly | Pro | Glu | Leu | Ala | Met | |
| | | | | 405 | | | | 410 | | | | | 415 | | |
| Ala | Val | Arg | Pro | Ala | Thr | Thr | Thr | Val | Asp | Ser | Ile | Gln | Ala | Pro | Ile |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Pro | Ser | His | Thr | Ala | Pro | Arg | Pro | Asn | Pro | Thr | Pro | Ala | Pro | Pro | Pro |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Pro | Cys | Phe | Pro | Val | Pro | Pro | Gln | Pro | Leu | Pro | Thr | Pro | Tyr | Thr | |
| | 450 | | | | | 455 | | | | 460 | | | | | |
| Tyr | Pro | Ala | Gly | Ala | Lys | Gln | Pro | Ile | Pro | Ala | Gln | His | His | Phe | Ser |
| 465 | | | | | 470 | | | | 475 | | | | | | 480 |
| Ser | Gly | Ile | Pro | Thr | Gly | Phe | Pro | Ala | Pro | Arg | Ile | Gly | Pro | Gln | Pro |
| | | | | 485 | | | | 490 | | | | | 495 | | |
| Gln | Pro | His | Pro | Gln | Pro | His | Pro | Ser | Gln | Ala | Phe | Gly | Pro | Gln | Pro |
| | | 500 | | | | | | 505 | | | | 510 | | | |
| Pro | Gln | Gln | Pro | Leu | Pro | Leu | Gln | His | Pro | His | Leu | Phe | Pro | Pro | Gln |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Ala | Pro | Gly | Leu | Leu | Pro | Pro | Gln | Ser | Pro | Tyr | Pro | Tyr | Ala | Pro | Gln |
| | 530 | | | | | 535 | | | | 540 | | | | | |
| Pro | Gly | Val | Leu | Gly | Gln | Pro | Pro | Pro | Pro | Leu | His | Thr | Gln | Leu | Tyr |
| 545 | | | | | 550 | | | | 555 | | | | | | 560 |
| Pro | Gly | Pro | Ala | Gln | Asp | Pro | Leu | Pro | Ala | His | Ser | Gly | Ala | Leu | Pro |
| | | | | 565 | | | | 570 | | | | | 575 | | |
| Phe | Pro | Ser | Pro | Gly | Pro | Pro | Gln | Pro | Pro | His | Pro | Pro | Leu | Ala | Tyr |
| | | | 580 | | | | 585 | | | | | 590 | | | |
| Gly | Pro | Ala | Pro | Ser | Thr | Arg | Pro | Met | Gly | Pro | Gln | Ala | Ala | Pro | Leu |
| | | 595 | | | | | 600 | | | | 605 | | | | |
| Thr | Ile | Arg | Gly | Pro | Ser | Ser | Ala | Gly | Gln | Ser | Thr | Pro | Ser | Pro | His |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Leu | Val | Pro | Ser | Pro | Ala | Pro | Ser | Pro | Gly | Pro | Gly | Pro | Val | Pro | Pro |
| 625 | | | | | 630 | | | | 635 | | | | | | 640 |
| Arg | Pro | Pro | Ala | Ala | Glu | Pro | Pro | Pro | Cys | Leu | Arg | Arg | Gly | Ala | Ala |
| | | | | 645 | | | | 650 | | | | | 655 | | |
| Ala | Ala | Asp | Leu | Leu | Ser | Ser | Ser | Pro | Glu | Ser | Gln | His | Gly | Gly | Thr |


```
<210> 5657
<211> 1020
<212> DNA
<213> Homo sapiens
```

```
<400> 5657
tgcggaacagt tgaagaagcg accgagggac tgggagtcgt tagtgaggat gacgcggcat
60
ggcaagaact gcaccgcagg cgccgtctac acctaccacg agaagaagaa ggacacagcg
120
gcctcgggct atgggaccca gaacattcga ctgagccggg atgccgtgaa ggacttcgac
180
```

tgctgttgtc tctccctgca gccttgccac gatcctgttg tcaccccaga tggctacctg
 240
 tatgagcgtg aggccatcct ggagtacatt ctgcaccaga agaaggagat tgcccggcag
 300
 atgaaggcct acgagaagca gcgggggcacc cggcgcgagg agcagaagga gcttcagcgg
 360
 gcggcctcgc aggaccatgt gcgggggcttc ctggagaagg agtcggctat cgtgagccgg
 420
 cccctcaacc ctttcacagc caaggccctc tcggggcacca gccagatga tgtccaacct
 480
 gggcccagtg tgggtcctcc aagtaaggac aaggacaaag tgctgccag cttctggatc
 540
 ccgtcgctga cgcccgaagc caaggccacc aagctggaga agccgtcccg cacggtgacc
 600
 tgcccatgt caggaagcc cctgcgcctg tcggacctga cgcccgtaga cttcacaccg
 660
 ctagacagct ccgtggaccg cgtggggctc atcaccgcga gcgagcgcta cgtgtgtgcc
 720
 gtgaccgcg acagcctgag caacgccacc ccctgcgctg tgctgcggcc ctctggggct
 780
 gtggtcaccc tcgaatgctg ggagaagctg attcggaagg acatggtgga ccctgtgact
 840
 ggagacaaac tcacagaccg cgacatcatc gtgctgcagc ggggcggtag cggcttcgcg
 900
 ggctccggag tgaagctgca agcggagaaa tcacggccgg tgatgcaggc ctgagtgtgt
 960
 gcgggagacc aaataaaccg gcttggggtgc gcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1020

<210> 5658

<211> 301

<212> PRT

<213> Homo sapiens

<400> 5658

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | Arg | His | Gly | Lys | Asn | Cys | Thr | Ala | Gly | Ala | Val | Tyr | Thr | Tyr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| His | Glu | Lys | Lys | Lys | Asp | Thr | Ala | Ala | Ser | Gly | Tyr | Gly | Thr | Gln | Asn |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ile | Arg | Leu | Ser | Arg | Asp | Ala | Val | Lys | Asp | Phe | Asp | Cys | Cys | Cys | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Leu | Gln | Pro | Cys | His | Asp | Pro | Val | Val | Thr | Pro | Asp | Gly | Tyr | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Tyr | Glu | Arg | Glu | Ala | Ile | Leu | Glu | Tyr | Ile | Leu | His | Gln | Lys | Lys | Glu |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Ile | Ala | Arg | Gln | Met | Lys | Ala | Tyr | Glu | Lys | Gln | Arg | Gly | Thr | Arg | Arg |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Glu | Glu | Gln | Lys | Glu | Leu | Gln | Arg | Ala | Ala | Ser | Gln | Asp | His | Val | Arg |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gly | Phe | Leu | Glu | Lys | Glu | Ser | Ala | Ile | Val | Ser | Arg | Pro | Leu | Asn | Pro |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Phe | Thr | Ala | Lys | Ala | Leu | Ser | Gly | Thr | Ser | Pro | Asp | Asp | Val | Gln | Pro |
| | 130 | | | | | | 135 | | | | 140 | | | | |
| Gly | Pro | Ser | Val | Gly | Pro | Pro | Ser | Lys | Asp | Lys | Asp | Lys | Val | Leu | Pro |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 145 | | | | | 150 | | | | | 155 | | | | 160 |
| Ser | Phe | Trp | Ile | Pro | Ser | Leu | Thr | Pro | Glu | Ala | Lys | Ala | Thr | Lys |
| | | | | 165 | | | | | 170 | | | | | 175 |
| Glu | Lys | Pro | Ser | Arg | Thr | Val | Thr | Cys | Pro | Met | Ser | Gly | Lys | Pro |
| | | | 180 | | | | | 185 | | | | | 190 | |
| Arg | Met | Ser | Asp | Leu | Thr | Pro | Val | His | Phe | Thr | Pro | Leu | Asp | Ser |
| | 195 | | | | | 200 | | | | | 205 | | | |
| Val | Asp | Arg | Val | Gly | Leu | Ile | Thr | Arg | Ser | Glu | Arg | Tyr | Val | Cys |
| | 210 | | | | | 215 | | | | 220 | | | | |
| Val | Thr | Arg | Asp | Ser | Leu | Ser | Asn | Ala | Thr | Pro | Cys | Ala | Val | Leu |
| | 225 | | | | 230 | | | | | 235 | | | | 240 |
| Pro | Ser | Gly | Ala | Val | Val | Thr | Leu | Glu | Cys | Val | Glu | Lys | Leu | Ile |
| | | | 245 | | | | | 250 | | | | | 255 | |
| Lys | Asp | Met | Val | Asp | Pro | Val | Thr | Gly | Asp | Lys | Leu | Thr | Asp | Arg |
| | 260 | | | | | | | 265 | | | | 270 | | |
| Ile | Ile | Val | Leu | Gln | Arg | Gly | Gly | Thr | Gly | Phe | Ala | Gly | Ser | Gly |
| | 275 | | | | | 280 | | | | | 285 | | | |
| Lys | Leu | Gln | Ala | Glu | Lys | Ser | Arg | Pro | Val | Met | Gln | Ala | | |
| | 290 | | | | | 295 | | | | | 300 | | | |

<210> 5659

<211> 1263

<212> DNA

<213> Homo sapiens

<400> 5659

```

nttttaaaac gtaattat ttt aattctgaga ctctgggaga gggggcttag atctctgctt
60
tgggtgttct tctcagatgc ggtgctttta aaaaaaagtg taattattta atcctgagac
120
tcagagaagg cttagatcta tgcattgggt gttatttctca gatgcagaga tgtaaatgcc
180
atTTTTctct tctgttttca ggtcacatgt gccaatTTaa cgaacggtgg aaagtcagaa
240
cttctgaaat caggaagcag caaatccaca ctaaagcaca tatggacaga aagcagcaaa
300
gacttgtcta tcagccgact cctgtcacag acttttcgtg gcaaagagaa tgatacagat
360
ttggacctga gatatgacac cccagaacct tattctgagc aagacctctg ggactggctg
420
aggaactcca cagaccttca agagcctcgg ccagggcca agagaaggcc cattgttaaa
480
acgggcaagt ttaagaaaat gtttggatgg ggcgattttc attccaacat caaaacagtg
540
aagctgaacc tgttgataac tgggaaaatt gtagatcatg gcaatgggac atttagtggt
600
tatttcaggc ataattcaac tgggtcaaggg aatgtatctg tcagcttggt accccctaca
660
aaaatcgtgg aatttgactt ggcacaacaa accgtgattg atgccaaaga ttccaagtct
720
tttaattgtc gcattgaata tgaaaagggt gacaaggcta ccaagaacac actctgcaac
780
tatgaccctt caaaaacctg ttaccaggag caaacccaaa gtcatgtatc ctggctctgc
840

```

tccaagccct ttaaggtgat ctgtatttac atttcctttt atagtacaga ttataaaactg
 900
 gtacagaaag tgtgccctga ctacaactac cacagtgaca caccttactt tccttcggga
 960
 tgaaggtgaa catgggggtg agactgaagc ctgaggaatt aaaggtcata tgacagggct
 1020
 gttacctcaa agaagaaggt cacatctggt gcctggaatg tgtctacact gctgctcttg
 1080
 tcaactggct gcaaaatata ctagtggaac acactctgat gtaatttctg cccagtcagc
 1140
 ttcattccctc agtataattg taaatcatca cagattttga attcacacct gaagacatgc
 1200
 tctcacatat agaggtacac aaacacaccg tcatgcacat ttcagcttgc gtctatcatg
 1260
 att
 1263

<210> 5660

<211> 253

<212> PRT

<213> Homo sapiens

<400> 5660

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Thr | Cys | Ala | Asn | Leu | Thr | Asn | Gly | Gly | Lys | Ser | Glu | Leu | Leu | Lys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Gly | Ser | Ser | Lys | Ser | Thr | Leu | Lys | His | Ile | Trp | Thr | Glu | Ser | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Lys | Asp | Leu | Ser | Ile | Ser | Arg | Leu | Leu | Ser | Gln | Thr | Phe | Arg | Gly | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Glu | Asn | Asp | Thr | Asp | Leu | Asp | Leu | Arg | Tyr | Asp | Thr | Pro | Glu | Pro | Tyr |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Ser | Glu | Gln | Asp | Leu | Trp | Asp | Trp | Leu | Arg | Asn | Ser | Thr | Asp | Leu | Gln |
| 65 | | | | 70 | | | | | | 75 | | | | | 80 |
| Glu | Pro | Arg | Pro | Arg | Ala | Lys | Arg | Arg | Pro | Ile | Val | Lys | Thr | Gly | Lys |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Phe | Lys | Lys | Met | Phe | Gly | Trp | Gly | Asp | Phe | His | Ser | Asn | Ile | Lys | Thr |
| | | | 100 | | | | 105 | | | | | | 110 | | |
| Val | Lys | Leu | Asn | Leu | Leu | Ile | Thr | Gly | Lys | Ile | Val | Asp | His | Gly | Asn |
| | | 115 | | | | 120 | | | | | | 125 | | | |
| Gly | Thr | Phe | Ser | Val | Tyr | Phe | Arg | His | Asn | Ser | Thr | Gly | Gln | Gly | Asn |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Val | Ser | Val | Ser | Leu | Val | Pro | Pro | Thr | Lys | Ile | Val | Glu | Phe | Asp | Leu |
| 145 | | | | 150 | | | | | | 155 | | | | | 160 |
| Ala | Gln | Gln | Thr | Val | Ile | Asp | Ala | Lys | Asp | Ser | Lys | Ser | Phe | Asn | Cys |
| | | | | 165 | | | | 170 | | | | | | 175 | |
| Arg | Ile | Glu | Tyr | Glu | Lys | Val | Asp | Lys | Ala | Thr | Lys | Asn | Thr | Leu | Cys |
| | | | 180 | | | | 185 | | | | | | 190 | | |
| Asn | Tyr | Asp | Pro | Ser | Lys | Thr | Cys | Tyr | Gln | Glu | Gln | Thr | Gln | Ser | His |
| | | 195 | | | | 200 | | | | | | 205 | | | |
| Val | Ser | Trp | Leu | Cys | Ser | Lys | Pro | Phe | Lys | Val | Ile | Cys | Ile | Tyr | Ile |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ser | Phe | Tyr | Ser | Thr | Asp | Tyr | Lys | Leu | Val | Gln | Lys | Val | Cys | Pro | Asp |
| 225 | | | | 230 | | | | | | 235 | | | | | 240 |
| Tyr | Asn | Tyr | His | Ser | Asp | Thr | Pro | Tyr | Phe | Pro | Ser | Gly | | | |

245

250

<210> 5661

<211> 578

<212> DNA

<213> Homo sapiens

<400> 5661

```

agagctcgaa ggggccatat gacactcctc ccggaccctt ggacacacac agccctgggg
60
actggatgcc ttggagcatg caagtccaga gcaccctggg agccctgggt catgggaccc
120
ataaccagtg gcacggcaag gaccagcag gaagcaccag ccactggccc cgacctcccg
180
caccaggac ctgacgggca cttagacaca cacagtggcc tgagctccaa ctccagcatg
240
accacgctgg agcttcagca gtactggcag aaccagaaat gccgctggaa gcacgtcaaa
300
ctgctctttg agatcgcttc agctcgcatc gaggagagaa aagtctctaa gtttgtgatg
360
gggaaatcaa ggctggaga gatgacttat ccagggtcac gtggcgagac agggacagca
420
ccagaaccag acccgagatg tccacgtcaa agtgacatgc tctgagaggc agcacacaca
480
gaataaccct gcatccaaat tccaggaagc tcttaggggt catccagctg ggcttagggg
540
tgcagggtca gtgctgaggc ctgggcaggg ccgctagc
578

```

<210> 5662

<211> 148

<212> PRT

<213> Homo sapiens

<400> 5662

```

Met Thr Leu Leu Pro Asp Pro Trp Thr His Thr Ala Leu Gly Thr Gly
1           5           10           15
Cys Leu Gly Ala Cys Lys Ser Arg Ala Pro Trp Glu Pro Trp Cys Met
20           25           30
Gly Pro Ile Thr Gln Cys Thr Ala Arg Thr Gln Gln Glu Ala Pro Ala
35           40           45
Thr Gly Pro Asp Leu Pro His Pro Gly Pro Asp Gly His Leu Asp Thr
50           55           60
His Ser Gly Leu Ser Ser Asn Ser Ser Met Thr Thr Arg Glu Leu Gln
65           70           75           80
Gln Tyr Trp Gln Asn Gln Lys Cys Arg Trp Lys His Val Lys Leu Leu
85           90           95
Phe Glu Ile Ala Ser Ala Arg Ile Glu Glu Arg Lys Val Ser Lys Phe
100          105          110
Val Met Gly Lys Ser Arg Pro Gly Glu Met Thr Tyr Pro Gly Ser Arg
115          120          125
Gly Glu Thr Gly Thr Ala Pro Glu Pro Asp Pro Arg Cys Pro Arg Gln
130          135          140
Ser Asp Met Leu

```

145

<210> 5663

<211> 857

<212> DNA

<213> Homo sapiens

<400> 5663

```

tttttttttt tttttttgca gtaagtaact cagaatgact ttactcagga aatatgacca
60
tgactcactg gctaggagtg ccccatgccc agttcttaga gacccttgat agctcctaga
120
agacaggagg ctgccgtggt caagaagggc caagccttga agtctcacgg caccctctgt
180
ggtggaggta taaggctcag gggccaacta ctgggtcttg cagtcccat cgttgctgtg
240
ggctgtcttc accttcttta gttccttctg tagctcagac tcggccacca caacctcctt
300
tggcttctgg taagagatga tcagggtgca gttggcgtgg gcaaagctca gcaaggcgtc
360
atccagaggt agctggtgtc tatctagatc aggaatggag aacttcttgt agtacttctt
420
gttggttggt ctgacaatga tgcagcgtc cttctggtcc acagagacac tatagacatc
480
cttaggatag gggagggttc gaatccgcc ctggaaactc atcttggtgt ccttgcgcat
540
gaagatagga ttggcattgc tttccttgat gagttcaggc cccagggtcc ctgctcctag
600
gggcgctggg tctcctactt caagctgcc ctggcccatg gctcccaggg cacttttcac
660
acgccacttt ctcaaaagta gttcactcgt cttctcgtca tattcttcag ccatttcctt
720
gccgtctggg aataaatagt gaaccttcct tctcccgctc tgcagcagcg cagtcttctg
780
ggctgtccgc agactctcca accagcccgt caccgccatc tttcccctgc taagcagcac
840
gcccagccgc tgccatg
857

```

<210> 5664

<211> 203

<212> PRT

<213> Homo sapiens

<400> 5664

```

Met Ala Val Thr Gly Trp Leu Glu Ser Leu Arg Thr Ala Gln Lys Thr
  1             5             10             15
Ala Leu Leu Gln Asp Gly Arg Arg Lys Val His Tyr Leu Phe Pro Asp
          20             25             30
Gly Lys Glu Met Ala Glu Glu Tyr Asp Glu Lys Thr Ser Glu Leu Leu
          35             40             45
Val Arg Lys Trp Arg Val Lys Ser Ala Leu Gly Ala Met Gly Gln Trp
          50             55             60
Gln Leu Glu Val Gly Asp Pro Ala Pro Leu Gly Ala Gly Asn Leu Gly

```

```

65          70          75          80
Pro Glu Leu Ile Lys Glu Ser Asn Ala Asn Pro Ile Phe Met Arg Lys
          85          90          95
Asp Thr Lys Met Ser Phe Gln Trp Arg Ile Arg Asn Leu Pro Tyr Pro
          100          105          110
Lys Asp Val Tyr Ser Val Ser Val Asp Gln Lys Glu Arg Cys Ile Ile
          115          120          125
Val Arg Thr Thr Asn Lys Lys Tyr Tyr Lys Lys Phe Ser Ile Pro Asp
          130          135          140
Leu Asp Arg His Gln Leu Pro Leu Asp Asp Ala Leu Leu Ser Phe Ala
145          150          155          160
His Ala Asn Cys Thr Leu Ile Ile Ser Tyr Gln Lys Pro Lys Glu Val
          165          170          175
Val Val Ala Glu Ser Glu Leu Gln Lys Glu Leu Lys Lys Val Lys Thr
          180          185          190
Ala His Ser Asn Asp Gly Asp Cys Lys Thr Gln
          195          200

```

<210> 5665
 <211> 531
 <212> DNA
 <213> Homo sapiens

```

<400> 5665
gtcaagtcct gtaggcagca tagggccctg gctcagcttt tctctgcaga ggcctcgctt
60
gagtgggtgg ggtttgcccg cccgcagatc tccacgggag ggggaggggt caggcctccc
120
cagcggccct ctgaagtcac ttgcttcacg gaggtgttac tgtctgctgc tggacagagc
180
atgatggggg ctgcaagggc tccctcaaac cctggactcc tccaacagag ggctcctggg
240
tgccaggctc agctctgccc tgcgtcggcc ccagggcgta gggaggggtgt ttaatcctgg
300
ccccggcctt ccccgaggt ggagcgcgtg tcgcacccgc tgctgcagca gcagtatgag
360
ctgtaccggg agcgcctgct gcagcgatgc gagcggcgcc cgggtggagca ggtgctgtac
420
cacggcacga cggcaccggc agtgccctgac atctgcgccc acggcttcaa ccgcagcttc
480
tgcgggccga acgccacggg ctacgggaag ggcgtgtatt tcgccaggcg c
531

```

<210> 5666
 <211> 79
 <212> PRT
 <213> Homo sapiens

```

<400> 5666
Ser Trp Pro Gly Pro Ser Pro Gln Val Glu Arg Val Ser His Pro Leu
1          5          10          15
Leu Gln Gln Gln Tyr Glu Leu Tyr Arg Glu Arg Leu Leu Gln Arg Cys
20          25          30
Glu Arg Arg Pro Val Glu Gln Val Leu Tyr His Gly Thr Thr Ala Pro

```

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| | 35 | | | | | 40 | | | | | | 45 | | | | | | | |
| Ala | Val | Pro | Asp | Ile | Cys | Ala | His | Gly | Phe | Asn | Arg | Ser | Phe | Cys | Gly | | | | |
| | 50 | | | | | 55 | | | | | 60 | | | | | | | | |
| Arg | Asn | Ala | Thr | Val | Tyr | Gly | Lys | Gly | Val | Tyr | Phe | Ala | Arg | Arg | | | | | |
| 65 | | | | | 70 | | | | | 75 | | | | | | | | | |

<210> 5667
 <211> 858
 <212> DNA
 <213> Homo sapiens

<400> 5667
 nattcggcac gaggtagtca aagtatgcag cctccaatta ttccactctt ccctgttgct
 60
 aagaaagata tgacatttct acatgaagga aatgactcca aagtagatgg tttagtaaac
 120
 tttgagaagt taagaatgat ttccaaggaa atccgccaag ttgttcgaat gacttctgct
 180
 aacatggacc cagctatgat gtttcgacag aggtcactga gtcaaggaag cacaaattca
 240
 aacatgctgg atgttcaggg aggtgctcac aaaaaaggg cacgccgcag ctctctgctt
 300
 aatgccaaaga agctatatga ggatgccccaa atggcaagga aggtgaagca gtatctttcc
 360
 agtctcgatg tagagacaga tgaggagaag ttccagatga tgtcattaca gntggagcct
 420
 gcatatggta cctgtgagta caagttttca tttatgtgac gctaaagagc acaacaaaat
 480
 aaaaacttat ttctctagaa ttatacctaa gtcccaagaa aattaacttt cactcacaaa
 540
 agattgctgg cataccttaa gcatcatgtg atccaattaa tcacagactg aatcccatcc
 600
 attcctgatg gctacactat ccaaaaaata gagggataag tagatcttta aaaagctttt
 660
 taattctttt aaaaactgga tcattataga ggaggctttc tgtttgagaa catttttata
 720
 ttcaccccta aagagtaaac ataagtggaa tttttacctc tttttatttc atggataata
 780
 tttaccaact agaaaatata agaaatttga ttaaaacacc agtgataata ggtagcttac
 840
 aggtgccagt agtaagg
 858

<210> 5668
 <211> 152
 <212> PRT
 <213> Homo sapiens

<400> 5668
 Xaa Ser Ala Arg Gly Ser Gln Ser Met Gln Pro Pro Ile Ile Pro Leu
 1 5 10 15
 Phe Pro Val Val Lys Lys Asp Met Thr Phe Leu His Glu Gly Asn Asp
 20 25 30
 Ser Lys Val Asp Gly Leu Val Asn Phe Glu Lys Leu Arg Met Ile Ser


```

<400> 5669
tttgtgctgt caccggcac agaccctgct gccgacctct acaagtttgc cgaagaaatg
60
aagttctcca aaaagctctc tgccatctcc ctggggccagg ggcagggccc tcgggcagaa
120
gccatgatgc gcagctccat agagaggggc aaatgggtct tcttcagaa ctgccacctg
180
gcaccaagct ggatgccagc cctagaacgc ctcatcgagc acatcaaccc cgacaaggta
240
cacagggact tccgcctctg gtcaccagc ctgcccagca acaagttccc agtgtccatc
300
ctgcagaacg gctccaagat gaccattgag ccgccacgcg gtgtcagggc caacctgctg
360
aagtcctata gtagccttgg tgaagacttc ctcaactcct gccacaaggt gatggagttc
420
aagtctctgc tgctgtctct gtgcttgttc catgggaacg ccctggagcg ccgtaagttt
480
gggcccctgg gcttcaacat cccctatgag ttcacggatg gagatctgcg catctgcatc
540
agccagctca agatgttcct ggacgaatat gatgacatcc cctacaaggt cctcaagtac
600
acggcagggg agatcaatta cggggggccgt gtcactgatg actgggaccg gcgctgcatc
660
atgaacatct tggaggactt ctacaaccct gacgtgctct ccctgagca cagctacagc
720
gcctcgggca tctaccacca gatcccgctt acctacgacc tccacggcta cctctcctac
780
atcaagagcc tcccactcaa tgatatgcct gagatctttg gcctgcatga caatgccaac
840
atcacctttg ccagaaacga gacgttcgcc ctctggggca ccatcatcca gctgcaaccc
900
aaatcatctt ctgcaggcag ccaggggccgg gaggagatag tggaggacgt caccctaaac
960

```

attctgctca aggtgcctga gcctatcaac ttgcaatggg tgatggccaa gtacccagtg
 1020
 ctgtatgagg aatcaatgaa cacagtacta gtacaagagg tcattaggta caatcggctg
 1080
 ctgcaggtga tcacacagac actgcaagac ctactcaagg cactcaaggg gctggtagtg
 1140
 atgtcctctc agctggagct gatggctgcc agcctgtaca acaatactgt gctgagctc
 1200
 tggagtgcc aaggcctaccc atcgtcaag cctctgtcat catgggtcat ggacctgctg
 1260
 caacgcctgg actttctgca ggcttgatc caagatggca tcccagctgt cttctggatc
 1320
 agtggattct tcttccccca ggctttctta acaggcactc tgcagaattt tgcccgcaaa
 1380
 tttgtcatct ccattgacac catctccttt gatttcaagg tgatgtttga ggcaccatca
 1440
 gagttaacac aaagacccca agtaggggtgc tatatccatg gattattcct ggaagggtgcc
 1500
 cgctggggtc cagaggcctt ccagctggct gagtctcagc ccaaggagct gtacacagag
 1560
 atggccgtta tctggctctt gccaacaccc aaccgcaagg cccaggacca ggacttttac
 1620
 ctgtgcccc a tctacaagac actgactcgt gctggaacac tatcaaccac aggacactct
 1680
 accaactatg tcattgctgt ggagatcccc acccatcagc cccagcgaca ctggataaag
 1740
 cgtgggtgtg ccctcatctg tgccctggac tactagactc agacagaagg gctggggcca
 1800
 ttaaagctga attttctaag caaaaaaaaaa aaaaaaaaaa aa
 1842

<210> 5670

<211> 591

<212> PRT

<213> Homo sapiens

<400> 5670

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Val | Leu | Ser | Pro | Gly | Thr | Asp | Pro | Ala | Ala | Asp | Leu | Tyr | Lys | Phe |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Ala | Glu | Glu | Met | Lys | Phe | Ser | Lys | Lys | Leu | Ser | Ala | Ile | Ser | Leu | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Gly | Gln | Gly | Pro | Arg | Ala | Glu | Ala | Met | Met | Arg | Ser | Ser | Ile | Glu |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Arg | Gly | Lys | Trp | Val | Phe | Phe | Gln | Asn | Cys | His | Leu | Ala | Pro | Ser | Trp |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Met | Pro | Ala | Leu | Glu | Arg | Leu | Ile | Glu | His | Ile | Asn | Pro | Asp | Lys | Val |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| His | Arg | Asp | Phe | Arg | Leu | Trp | Leu | Thr | Ser | Leu | Pro | Ser | Asn | Lys | Phe |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Pro | Val | Ser | Ile | Leu | Gln | Asn | Gly | Ser | Lys | Met | Thr | Ile | Glu | Pro | Pro |
| | | | 100 | | | | 105 | | | | | | 110 | | |
| Arg | Gly | Val | Arg | Ala | Asn | Leu | Leu | Lys | Ser | Tyr | Ser | Ser | Leu | Gly | Glu |
| | | | 115 | | | 120 | | | | | | 125 | | | |
| Asp | Phe | Leu | Asn | Ser | Cys | His | Lys | Val | Met | Glu | Phe | Lys | Ser | Leu | Leu |

| | | |
|---|-----|-----|
| 130 | 135 | 140 |
| Leu Ser Leu Cys Leu Phe His Gly Asn Ala Leu Glu Arg Arg Lys Phe | | |
| 145 | 150 | 155 |
| Gly Pro Leu Gly Phe Asn Ile Pro Tyr Glu Phe Thr Asp Gly Asp Leu | | |
| | 165 | 170 |
| Arg Ile Cys Ile Ser Gln Leu Lys Met Phe Leu Asp Glu Tyr Asp Asp | | |
| | 180 | 185 |
| Ile Pro Tyr Lys Val Leu Lys Tyr Thr Ala Gly Glu Ile Asn Tyr Gly | | |
| | 195 | 200 |
| Gly Arg Val Thr Asp Asp Trp Asp Arg Arg Cys Ile Met Asn Ile Leu | | |
| | 210 | 215 |
| Glu Asp Phe Tyr Asn Pro Asp Val Leu Ser Pro Glu His Ser Tyr Ser | | |
| 225 | 230 | 235 |
| Ala Ser Gly Ile Tyr His Gln Ile Pro Pro Thr Tyr Asp Leu His Gly | | |
| | 245 | 250 |
| Tyr Leu Ser Tyr Ile Lys Ser Leu Pro Leu Asn Asp Met Pro Glu Ile | | |
| | 260 | 265 |
| Phe Gly Leu His Asp Asn Ala Asn Ile Thr Phe Ala Gln Asn Glu Thr | | |
| | 275 | 280 |
| Phe Ala Leu Leu Gly Thr Ile Ile Gln Leu Gln Pro Lys Ser Ser Ser | | |
| | 290 | 295 |
| Ala Gly Ser Gln Gly Arg Glu Glu Ile Val Glu Asp Val Thr Gln Asn | | |
| 305 | 310 | 315 |
| Ile Leu Leu Lys Val Pro Glu Pro Ile Asn Leu Gln Trp Val Met Ala | | |
| | 325 | 330 |
| Lys Tyr Pro Val Leu Tyr Glu Glu Ser Met Asn Thr Val Leu Val Gln | | |
| | 340 | 345 |
| Glu Val Ile Arg Tyr Asn Arg Leu Leu Gln Val Ile Thr Gln Thr Leu | | |
| | 355 | 360 |
| Gln Asp Leu Leu Lys Ala Leu Lys Gly Leu Val Val Met Ser Ser Gln | | |
| | 370 | 375 |
| Leu Glu Leu Met Ala Ala Ser Leu Tyr Asn Asn Thr Val Pro Glu Leu | | |
| 385 | 390 | 395 |
| Trp Ser Ala Lys Ala Tyr Pro Ser Leu Lys Pro Leu Ser Ser Trp Val | | |
| | 405 | 410 |
| Met Asp Leu Leu Gln Arg Leu Asp Phe Leu Gln Ala Trp Ile Gln Asp | | |
| | 420 | 425 |
| Gly Ile Pro Ala Val Phe Trp Ile Ser Gly Phe Phe Phe Pro Gln Ala | | |
| | 435 | 440 |
| Phe Leu Thr Gly Thr Leu Gln Asn Phe Ala Arg Lys Phe Val Ile Ser | | |
| | 450 | 455 |
| Ile Asp Thr Ile Ser Phe Asp Phe Lys Val Met Phe Glu Ala Pro Ser | | |
| 465 | 470 | 475 |
| Glu Leu Thr Gln Arg Pro Gln Val Gly Cys Tyr Ile His Gly Leu Phe | | |
| | 485 | 490 |
| Leu Glu Gly Ala Arg Trp Asp Pro Glu Ala Phe Gln Leu Ala Glu Ser | | |
| | 500 | 505 |
| Gln Pro Lys Glu Leu Tyr Thr Glu Met Ala Val Ile Trp Leu Leu Pro | | |
| | 515 | 520 |
| Thr Pro Asn Arg Lys Ala Gln Asp Gln Asp Phe Tyr Leu Cys Pro Ile | | |
| | 530 | 535 |
| Tyr Lys Thr Leu Thr Arg Ala Gly Thr Leu Ser Thr Thr Gly His Ser | | |
| 545 | 550 | 555 |
| Thr Asn Tyr Val Ile Ala Val Glu Ile Pro Thr His Gln Pro Gln Arg | | |

| | | | | | |
|---|-----|--|-----|--|-----|
| | 565 | | 570 | | 575 |
| His Trp Ile Lys Arg Gly Val Ala Leu Ile Cys Ala Leu Asp Tyr | | | | | |
| | 580 | | 585 | | 590 |

<210> 5671

<211> 818

<212> DNA

<213> Homo sapiens

<400> 5671

```

nngcgcgccca gggaaagtgg aagttggatt ctgaaagatc gaggtgccca caggaatttt
60
atggtcgtcg gattttgaag acttgaacta gactgggggt tctccttgca tttcttgctt
120
gttgccctatc tttgtcctct ctcttcgggc ttcgagatga atgtgcagcc ctgttctagg
180
tgtgggtatg gggtttatcc tgccgagaag atcagctgta tagatcagat atggcataaa
240
gcctgttttc actgtgaagt ttgcaagatg atgctgtctg ttaataactt tgtgagtcac
300
cagaaaaagc cgtactgtca cgcccataac cctaagaaca acactttcac cagtgtctat
360
cacactccat taaatctaaa tgtgaggaca tttccagagg ccatcagtg gatccatgac
420
caagaagatg gtgaacagtg taaatcagtt tttcattggg acatgaaatc caaggataag
480
gaaggtgcac ctaacaggca gccactggca aatgagagag cctattggac tggatatggg
540
gaagggaatg cttgggtgcc aggagctctg ccagaccccg aaattgtaag gatgggttag
600
gctcgaaagt ctcttggtga ggaatataca gaagactatg agcaaccag gggcaagggg
660
agctttccag ccatgatcac acctgcttat caaagggcca agaaagccaa ccagctggcc
720
agccaagtgg agtataagag agggcatgat gaacgcatct ccaggttctc cacgggtggg
780
gatactcctg agctgctacg gagcaaggct tggggcac
818

```

<210> 5672

<211> 220

<212> PRT

<213> Homo sapiens

<400> 5672

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asn | Val | Gln | Pro | Cys | Ser | Arg | Cys | Gly | Tyr | Gly | Val | Tyr | Pro | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Lys | Ile | Ser | Cys | Ile | Asp | Gln | Ile | Trp | His | Lys | Ala | Cys | Phe | His |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Cys | Glu | Val | Cys | Lys | Met | Met | Leu | Ser | Val | Asn | Asn | Phe | Val | Ser | His |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Gln | Lys | Lys | Pro | Tyr | Cys | His | Ala | His | Asn | Pro | Lys | Asn | Asn | Thr | Phe |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Thr | Ser | Val | Tyr | His | Thr | Pro | Leu | Asn | Leu | Asn | Val | Arg | Thr | Phe | Pro |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |

Glu Ala Ile Ser Gly Ile His Asp Gln Glu Asp Gly Glu Gln Cys Lys
 85 90 95
 Ser Val Phe His Trp Asp Met Lys Ser Lys Asp Lys Glu Gly Ala Pro
 100 105 110
 Asn Arg Gln Pro Leu Ala Asn Glu Arg Ala Tyr Trp Thr Gly Tyr Gly
 115 120 125
 Glu Gly Asn Ala Trp Cys Pro Gly Ala Leu Pro Asp Pro Glu Ile Val
 130 135 140
 Arg Met Val Glu Ala Arg Lys Ser Leu Gly Glu Glu Tyr Thr Glu Asp
 145 150 155 160
 Tyr Glu Gln Pro Arg Gly Lys Gly Ser Phe Pro Ala Met Ile Thr Pro
 165 170 175
 Ala Tyr Gln Arg Ala Lys Lys Ala Asn Gln Leu Ala Ser Gln Val Glu
 180 185 190
 Tyr Lys Arg Gly His Asp Glu Arg Ile Ser Arg Phe Ser Thr Val Ala
 195 200 205
 Asp Thr Pro Glu Leu Leu Arg Ser Lys Ala Trp Gly
 210 215 220

<210> 5673

<211> 1279

<212> DNA

<213> Homo sapiens

<400> 5673

nttttttttt tttgaagcca gcatttccct ttattttctgg atggaaacgg ggccctaaaa
 60
 gcagaaatca atatttttgt ttgaaagatg cagtcattgct aattttcactt ttggctaaaa
 120
 ccgagacgat aaaagaacag ttgggtgttt ataggatgcc ctcaaagtga gctggctaag
 180
 tgagctgggc tctaacttca ctcacaaatt tatagtacag ctaagaaggc cagtctgtcc
 240
 atgaaaggga gccgagacaa gacgagggcg gcctcttcca ggctgtgtcc aagtgtcctt
 300
 ggggtcccg catggtccac acttctgcag catccgcaga acatgtggcc gggctcctgc
 360
 cagcagcagg gacagccaag tgggaggcag gcatggtgca cacctgggga ggccctgggt
 420
 gcagaagcag cccacagta gcagcccat ccagaggaag accactccgg agggccacag
 480
 gcctctgcag ccctggcact gccgcccagc cctccatctc agcgggatgt gcagggtgag
 540
 acaggaatgc agggacgttc tgcccctagg tcagcctctt catccgcctg ttgtgcttcg
 600
 atggtcaagg ttgccctgtc cacagctgct gcaacgccat ccagggttc gtcttgtctc
 660
 tccagctcac tctcggcctc cgggccagcc ccttcacct cctcaggatc tgggttagtt
 720
 cctgggtatc tgcctcagaa agggctggca ggcttgtctg cagggtgcagt gctgtgccct
 780
 cctggtctcc tgcgggtggc tcacggtgca gggtagggcc catcagccca gatgctgcat
 840

gccagactga gcagctcttc tctgcggggg aagaggttct tgcgcttctg agcaccaatg
 900
 catcttctaa cagctccatc ttcttgctga actgcacttc taaaatgggg ataacctctg
 960
 gcatcttggc agatatcaaa cgataggcca tgtctggcctt tccaataaac cgctggcgga
 1020
 tgctaatttc gtaaggtagg tggacctga tgcgtccac gtcttctctt tcaaacctgt
 1080
 gcatgagcaa agaactggag tcatgtattt ccaaccaga cacaaggacg gtgagcctcc
 1140
 ctggtttaac gtgagactct gttctgtggg aaataacagc aggaattttt atcagtatcc
 1200
 cttctttccc aaagggttca caactgggtca tggagacatc ttccctgggc tttgtttccg
 1260
 gtggtgtctt ccaaagctt
 1279

<210> 5674

<211> 81

<212> PRT

<213> Homo sapiens

<400> 5674

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | His | Ser | Gln | Ile | Tyr | Ser | Thr | Ala | Lys | Lys | Ala | Ser | Leu | Ser | Met |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Lys | Gly | Ser | Arg | Asp | Lys | Thr | Arg | Ala | Ala | Ser | Ser | Arg | Pro | Val | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Val | Leu | Gly | Val | Pro | Pro | Trp | Ser | Thr | Leu | Leu | Gln | His | Pro | Gln |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asn | Met | Trp | Pro | Gly | Pro | Ala | Gln | Gln | Gln | Gly | Gln | Pro | Ser | Gly | Arg |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Gln | Ala | Trp | Cys | Thr | Pro | Gly | Glu | Ala | Pro | Gly | Ala | Glu | Ala | Ala | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Gln | | | | | | | | | | | | | | | |

<210> 5675

<211> 1074

<212> DNA

<213> Homo sapiens

<400> 5675

nttttccact taaatacaaa ctttattctc tctccaagaa gatgcagacg tcacagggtgg
 60
 ccctgagctc ccacccgagg cttaggccca aggggcctct tccaggctga gggcctgctg
 120
 gggtggggcc aggggctgag gctgaaagca gcagcctgcc tagtgggtga cgccaggggc
 180
 cgggtgtaaca tggcaccgag gttggggcca cagcaatgtg tgggacggtg ggggtgggctg
 240
 ggcccttggt ctccaagcat tagttctcca agctctgggtc cgttctccta cctccttcaa
 300
 ggggcaccag ggctacaagg tggtagttga gtattggggc ccgactcctg gggcactgga
 360

gtggctctcta ggcccgaggc cccaaggaga gggctgggtt tctgggagag tgctggtcct
 420
 tcctctctgg gcttggccat cttgacagct tcatcgtagg aggggtggagg ctccggggtg
 480
 tacaggctgt aggcaggagg agccgtggag tccagggtcca gctccccaaa gggcaggggc
 540
 aaccgcatgc ccagtgggta ctgcacggag ctgtaggagg tcacagtgt gtgtacaggg
 600
 ctgtcactgt ccatagggat gactgccacg tcgcagggct gccgtgctgg tggcagatgt
 660
 ggctgggcct gtgcctgctt ccggaggcag cagaaccgga cacaaccagc tgtgacacca
 720
 cacagcagaa gcaggaggac cgccagcagg atgagcctag gagagcaagg ctctaccact
 780
 ggactgacct tcggccaccg ggcacctgca ccctggggaa tgtcgtggca caaccaccga
 840
 agacaggtta acaggataaa aagcagacaa tgtctctcca tgtcggagac cgccgtggcc
 900
 agagcctggc ctcgggctgc tgggcctgcc ctggctatct ctctgggct ggccaggggt
 960
 ggccttgggc tcactcccag gactcgctgt cctcagcgag tgccccactg ctgagcggga
 1020
 tcgtagggga ctcccgcgga ggccaggcgg gagagtggg aggggaaggtc ctgg
 1074

<210> 5676

<211> 145

<212> PRT

<213> Homo sapiens

<400> 5676

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Val | Thr | Val | Leu | Cys | Thr | Gly | Leu | Ser | Leu | Ser | Ile | Gly | Met | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Thr | Ser | Gln | Gly | Cys | Arg | Ala | Gly | Gly | Arg | Cys | Gly | Trp | Ala | Cys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Cys | Phe | Arg | Arg | Gln | Gln | Asn | Arg | Thr | Gln | Pro | Ala | Val | Thr | Pro |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| His | Ser | Arg | Ser | Arg | Arg | Thr | Ala | Ser | Arg | Met | Ser | Leu | Gly | Glu | Gln |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Ser | Thr | Thr | Gly | Leu | Thr | Leu | Gly | His | Arg | Ala | Pro | Ala | Pro | Trp |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Gly | Met | Ser | Trp | His | Asn | His | Arg | Arg | Gln | Val | Asn | Arg | Ile | Lys | Ser |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Arg | Gln | Cys | Leu | Ser | Met | Ser | Glu | Thr | Ala | Val | Ala | Arg | Ala | Trp | Pro |
| | | | 100 | | | | | | 105 | | | | 110 | | |
| Arg | Ala | Ala | Gly | Pro | Ala | Leu | Ala | Ile | Ser | Pro | Gly | Leu | Ala | Arg | Gly |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gly | Leu | Gly | Leu | Thr | Pro | Arg | Thr | Arg | Cys | Pro | Gln | Arg | Val | Pro | His |
| | 130 | | | | | | 135 | | | | | 140 | | | |
| Cys | | | | | | | | | | | | | | | |
| 145 | | | | | | | | | | | | | | | |

<210> 5677

<211> 477

<212> DNA

<213> Homo sapiens

<400> 5677

```

agcagctggt cctctttgaa gaggtcgatg ctgaaaggag gccgcctgac tccatggcaa
60
aaaaggacac tgggtgaagta gcggtagcac tcctccacgt tgcccaaggg gggtgctggg
120
agggaaagca agatgcagca gtgaggccct ctctgggtatc cattcattca cttcactcaa
180
cagctgttta tgaccatgag caatacaagc cttgtgaaga tcctggagca gggcacaagc
240
cgctgacgtc tgctccagtg agaagccctg ctgccttccc caattcgctt tctttccgca
300
gccgccgctg ccccgacccc ggatctgcat gtggaagtac ctggacgtcc attccatgca
360
ccagctggag aagaccacca atgctgagat gagggaggtg ctggctgagc tgctggagct
420
agggtgtcct gagcagagcc tgagcgacgc catcaccttg gacctcttct gccgcgg
477

```

<210> 5678

<211> 151

<212> PRT

<213> Homo sapiens

<400> 5678

```

Met Ala Ser Leu Arg Leu Cys Ser Gly His Pro Ser Ser Ser Ser Ser
 1           5           10           15
Ala Ser Thr Ser Leu Ile Ser Ala Leu Val Val Phe Ser Ser Trp Cys
          20           25           30
Met Glu Trp Thr Ser Arg Tyr Phe His Met Gln Ile Arg Gly Arg Gly
          35           40           45
Ser Gly Gly Cys Gly Lys Lys Ala Asn Trp Gly Arg Gln Gln Gly Phe
          50           55           60
Ser Leu Glu Gln Thr Ser Ala Ala Cys Ala Leu Leu Gln Asp Leu His
65           70           75           80
Lys Ala Cys Ile Ala His Gly His Lys Gln Leu Leu Ser Glu Val Asn
          85           90           95
Glu Trp Ile Pro Glu Arg Ala Ser Leu Leu His Leu Ala Phe Pro Thr
          100          105          110
Ser Asn Pro Leu Gly Gln Arg Gly Gly Val Leu Pro Leu Leu His Gln
          115          120          125
Cys Pro Phe Leu Pro Trp Ser Gln Ala Ala Ser Phe Gln His Arg Pro
          130          135          140
Leu Gln Arg Gly Thr Ala Ala
145           150

```

<210> 5679

<211> 665

<212> DNA

<213> Homo sapiens

<400> 5679

nngccccctcc aggaggggagc cgaggagatta cgcagctcca tgtaggtcta cgtttaggtt
 60
 gggaggatct accatgaaga aggtcaagaa gaaaagggtca gaggccagac gccaccggac
 120
 tccacctccc agcatgctgg ctccaattcc acctctcagc agcctagccc tgaatccaca
 180
 ccacagcagc ctagtctctga atccacacca cagcagccta gccctgaatc cacaccacag
 240
 cattccagcc ttgaaaccac ctcccggcag ccagcattcc aagcccttcc agcaccggaa
 300
 atccgcccgt cctcttgctg cctttttatct ccagatgcta acgtgaaggc agccccctcaa
 360
 tccaggaaag cagaaaaatct tcaagaaaaac cctccagtca tcgtaacgcg tgcctcccaa
 420
 gccctcggaa ctgtggctgt ggctctgggg gctctaggag ctgcctacta catcactgaa
 480
 tccttgtaga caagccccta ggcccacagt ctggcagacc tccaccagcc ccaggagttg
 540
 ataggtgatg gcgctgggag aagatgttca gaatatctca aaagccaagt ccagaagatc
 600
 cagtttccat caaaggggacc tctcttgctc ccaaaattta aaaaaagaaa aaaaaaacga
 660
 aaaaa
 665

<210> 5680

<211> 143

<212> PRT

<213> Homo sapiens

<400> 5680

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Arg | Ile | Tyr | His | Glu | Glu | Gly | Gln | Glu | Glu | Lys | Val | Arg | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Thr | Pro | Pro | Asp | Ser | Thr | Ser | Gln | His | Ala | Gly | Ser | Asn | Ser | Thr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gln | Gln | Pro | Ser | Pro | Glu | Ser | Thr | Pro | Gln | Gln | Pro | Ser | Pro | Glu |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Ser | Thr | Pro | Gln | Gln | Pro | Ser | Pro | Glu | Ser | Thr | Pro | Gln | His | Ser | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Glu | Thr | Thr | Ser | Arg | Gln | Pro | Ala | Phe | Gln | Ala | Leu | Pro | Ala | Pro |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Glu | Ile | Arg | Arg | Ser | Ser | Cys | Cys | Leu | Leu | Ser | Pro | Asp | Ala | Asn | Val |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Lys | Ala | Ala | Pro | Gln | Ser | Arg | Lys | Ala | Glu | Asn | Leu | Gln | Glu | Asn | Pro |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Pro | Val | Ile | Val | Thr | Arg | Val | Leu | Gln | Ala | Leu | Gly | Thr | Val | Ala | Val |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ala | Leu | Gly | Ala | Leu | Gly | Ala | Ala | Tyr | Tyr | Ile | Thr | Glu | Ser | Leu | |
| | 130 | | | | | 135 | | | | | 140 | | | | |

<210> 5681

<211> 1402

<212> DNA

<213> Homo sapiens

<400> 5681

gggcggcctg gcagctggcg gcattgagggc ggaccgtcta gaggtccgtc tgaccgcggc
60
gtcggggacct ggtttccggg catgagctga gagcaccacg ccgaggccac gagtatttca
120
tagacattga tggaa gcaga aacaaaaact cttcccctgg agaatgcac catcctttca
180
gagggctctc tgcaggaagg acaccgatta tggattggca acctggaccc caaaattacc
240
gaataccacc tcctcaagct cctccagaag tttggcaagg taaagcagtt tgacttcctc
300
ttccacaagt caggtgcttt ggagggacag cctcgaggct actgttttgt taactttgaa
360
actaagcagg aagcagagca agccatccag tgtctcaatg gcaagttggc cctgtccaag
420
aagctgggtg tgcgatgggc acatgctcaa gtaaagagat atgatcataa caagaatgat
480
aagattcttc caatcagtct cgagccatcc tcaagcactg agcctactca gtctaacct
540
agtgtcactg caaagataaa agccattgaa gcaaaactga aaatgatggc ggaaaatcct
600
gatgcagagt atccagcagc gcctgtttat tcctacttta agccaccaga taaaaaagg
660
actactccat attctagaac agcatggaaa tctcgaagat gatggttgtg aattactgta
720
gcagcaaaaag caaattgggtc tccacaccta aaatcgtctg cctgtgtact ttgtagatgt
780
gaatgggtact attcaacgga gcacaatcac atgttagcat ttggtaacat aatgtttttg
840
gatgttctta tggatgtttc ttccctaaac tatgtatgga attgagcatc atccagaata
900
aatagcgttg tatcccaa atgtgatttga accctgggat gctctaattg gctggttgg
960
ttggatttgt aactccagaa acattctata gtgtgccaga gcaaaaggca aatacacaaa
1020
atattattta aatcaggaaa ctaaaaatat taacatctat taaaaaattg agcatttttc
1080
tacgctcgtg tgtctttttac aacataaaga aaaagtaaaa ggcaggaggg gaagtgagag
1140
acagatttta aatcatgttc agaactgttg ttccagaatt tactacggca atccctccaa
1200
ctggactgaa aaagagaaaag ttcttggcaa aaaggagctg attctttgaa caaatgttgt
1260
agtaatctgt ttaagaatta tgcttattgt ttcaaaatcc caactaggaa aacatgggtg
1320
atatcttaaa attgtttgtg ttgacaaaac tagaatcaaa tttaacattt tataccacat
1380
cacaagttct atttgggata tt
1402

<210> 5682

<211> 190

<212> PRT

<213> Homo sapiens

<400> 5682

```

Met Glu Ala Glu Thr Lys Thr Leu Pro Leu Glu Asn Ala Ser Ile Leu
 1           5           10           15
Ser Glu Gly Ser Leu Gln Glu Gly His Arg Leu Trp Ile Gly Asn Leu
 20           25           30
Asp Pro Lys Ile Thr Glu Tyr His Leu Leu Lys Leu Leu Gln Lys Phe
 35           40           45
Gly Lys Val Lys Gln Phe Asp Phe Leu Phe His Lys Ser Gly Ala Leu
 50           55           60
Glu Gly Gln Pro Arg Gly Tyr Cys Phe Val Asn Phe Glu Thr Lys Gln
 65           70           75           80
Glu Ala Glu Gln Ala Ile Gln Cys Leu Asn Gly Lys Leu Ala Leu Ser
 85           90           95
Lys Lys Leu Val Val Arg Trp Ala His Ala Gln Val Lys Arg Tyr Asp
 100          105          110
His Asn Lys Asn Asp Lys Ile Leu Pro Ile Ser Leu Glu Pro Ser Ser
 115          120          125
Ser Thr Glu Pro Thr Gln Ser Asn Leu Ser Val Thr Ala Lys Ile Lys
 130          135          140
Ala Ile Glu Ala Lys Leu Lys Met Met Ala Glu Asn Pro Asp Ala Glu
 145          150          155          160
Tyr Pro Ala Ala Pro Val Tyr Ser Tyr Phe Lys Pro Pro Asp Lys Lys
 165          170          175
Arg Thr Thr Pro Tyr Ser Arg Thr Ala Trp Lys Ser Arg Arg
 180          185          190

```

<210> 5683

<211> 328

<212> DNA

<213> Homo sapiens

<400> 5683

```

ggatccatgc gttgccctag ggaggcctca gctgtcaagc actgaccatc tctgcagaca
60
cgcaggggctg acctgtactg gtgagtaagc attagccatg ggacgcacac aatccagcca
120
atgcttttcag aaggcaccac atgtgatgca cagcctctat ttacatgtga ataattacac
180
tgctgctttc tgggttaaaag tagggaaata cagtgttcca gggcatagga atggtgctct
240
gggtagaaaa gtttattttg ctgggtgggag gcagggttttg ttaataaagc tttgaaatac
300
acaaatttca ttctggatgc tgatgctg
328

```

<210> 5684

<211> 103

<212> PRT

<213> Homo sapiens

<400> 5684

```

Met Lys Phe Val Tyr Phe Lys Ala Leu Leu Thr Lys Pro Ala Ser His

```

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | | |
| Gln | Gln | Asn | Lys | Leu | Phe | Tyr | Pro | Glu | His | His | Ser | Tyr | Ala | Leu | Glu | | |
| | | | 20 | | | | | 25 | | | | | 30 | | | | |
| His | Cys | Ile | Ser | Leu | Leu | Leu | Thr | Arg | Lys | Gln | Gln | Cys | Asn | Tyr | Ser | | |
| | | 35 | | | | | 40 | | | | | 45 | | | | | |
| His | Val | Asn | Arg | Gly | Cys | Ala | Ser | His | Val | Val | Pro | Ser | Glu | Ser | Ile | | |
| | 50 | | | | | 55 | | | | | 60 | | | | | | |
| Gly | Trp | Ile | Val | Cys | Val | Pro | Trp | Leu | Met | Leu | Thr | His | Gln | Tyr | Arg | | |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | | | |
| Ser | Ala | Leu | Arg | Val | Cys | Arg | Asp | Gly | Gln | Cys | Leu | Thr | Ala | Glu | Ala | | |
| | | | 85 | | | | | 90 | | | | | 95 | | | | |
| Ser | Leu | Gly | Gln | Arg | Met | Asp | | | | | | | | | | | |
| | | | 100 | | | | | | | | | | | | | | |

<210> 5685

<211> 604

<212> DNA

<213> Homo sapiens

<400> 5685

```

ccatgcagcc gcgtgggtgg caagcgggtg gtgtgctatg acgacagatt cattgtgaag
60
ctggcctacg agtctgacgg gatcgtgggt tccaacgaca cataccgtga cctccaaggc
120
gagcggcagg agtggaagcg cttcatcgag gagcggctgc tcatgtactc cttcgtcaat
180
gacaagtatg ttccctccca gaggccctga cagacttggg gtccacaggg gaagccagag
240
gtgcccttgg caaggggtgga gctgggggct gggctctgcg gggccctgtg gccatgggag
300
gttgcgggtc ttggctccag gcagctttga gagtgagacg gatagctcac cacataggag
360
aaatcagacc gggaccaggc aggctgtggg gtggagagag tggctaattt gggagataga
420
gccgtagcac ttatgagggg atgtatgtgg ttgatggttc cagggtggcct ctctacgaac
480
caacatggca tctctcgagc agaggccatg ggccagtggg tgcgggctgc catccccga
540
cgacttcagg gagggagttc ccctaaaggt gcccatgggc tgtggccctc tagaccgggg
600
atcc
604

```

<210> 5686

<211> 69

<212> PRT

<213> Homo sapiens

<400> 5686

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Pro | Cys | Ser | Arg | Val | Gly | Gly | Lys | Arg | Val | Val | Cys | Tyr | Asp | Asp | Arg | | |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | | | |
| Phe | Ile | Val | Lys | Leu | Ala | Tyr | Glu | Ser | Asp | Gly | Ile | Val | Val | Ser | Asn | | |
| | | 20 | | | | | 25 | | | | | 30 | | | | | |
| Asp | Thr | Tyr | Arg | Asp | Leu | Gln | Gly | Glu | Arg | Gln | Glu | Trp | Lys | Arg | Phe | | |

35 40 45
 Ile Glu Glu Arg Leu Leu Met Tyr Ser Phe Val Asn Asp Lys Tyr Val
 50 55 60
 Pro Ser Gln Arg Pro
 65

<210> 5687
 <211> 328
 <212> DNA
 <213> Homo sapiens

<400> 5687
 actctctccc gaccgcgtgg tgcgggtaag ggtggtggtg atggtggtgg tggtagagcg
 60
 ccccggtctt gcatgcacgc ctgcgtgaac acccggggt cttcccggtg cacctgcccc
 120
 ggtggatccg aaactctggc tgacgggaag agctgtgaga atgtggatga atgtgtgggc
 180
 ctgcagccgg tgtgccccca ggggaccaca tgcataca cgggtggaag cttccagtgt
 240
 gtcagccctg agtgccccga gggcagcggc aatgtgagct acgtgaagac gtctccattc
 300
 cagtgtgagc ggaacccctg ccccatgg
 328

<210> 5688
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 5688
 Thr Leu Ser Arg Pro Arg Gly Ala Gly Lys Gly Gly Gly Asp Gly Gly
 1 5 10 15
 Gly Gly Glu Arg Pro Arg Leu Cys Met His Ala Cys Val Asn Thr Pro
 20 25 30
 Gly Ser Ser Arg Cys Thr Cys Pro Gly Gly Ser Glu Thr Leu Ala Asp
 35 40 45
 Gly Lys Ser Cys Glu Asn Val Asp Glu Cys Val Gly Leu Gln Pro Val
 50 55 60
 Cys Pro Gln Gly Thr Thr Cys Ile Asn Thr Gly Gly Ser Phe Gln Cys
 65 70 75 80
 Val Ser Pro Glu Cys Pro Glu Gly Ser Gly Asn Val Ser Tyr Val Lys
 85 90 95
 Thr Ser Pro Phe Gln Cys Glu Arg Asn Pro Cys Pro Met
 100 105

<210> 5689
 <211> 1897
 <212> DNA
 <213> Homo sapiens

<400> 5689
 nagtactaca aaatgtctgg cacatgacag atgctcatga taaaatgttt gacagttgaa
 60

tgaacaatca gaatcataga agagtgtgag cactgggcct ttgtcttcca ggtgggacag
120
tgtgtgggtg tcttcagcca ggctcctagt gggagagccc cactcagccc cagtttgaac
180
tctcgcccat cacctatcag tgccactncc tccagctctc gttcctgaaa cccgagagta
240
ccgctctcag tctccagtaa gaagcatgga tgaagctcct tgtgttaacg gccgctgggg
300
aacactgaga cccagggctc aaaggcagac tcctcagggt cccgggaagg gagcctttcc
360
ccagccagag gagacggctc tcctatcctc aatgggtggga gtttgtctcc aggaacggca
420
gctgtgggtg gctcttcttt ggacagtcct gtacaggcca tatctccaag tactccatct
480
gctgctgaag gatacgacct gaaaatagga ctttctttgg ccccccgcg aggatcaacc
540
agatcagaaa gatctgagat taggatccat agatctgaat tgggatctaa acccgcttcc
600
agtagtaatc ccatggatgg catggacaat aggacagttg ggggaagtat gagacaccct
660
cctgaacaga caaatgggtg gcatacccca cctcacgtgg ccagtgcctt tgcaggggccc
720
gtctccccag gtgccttgcg tcggagtctg gaagccatca aagcgatgtc ctccaaaggc
780
ccctcggcct ctgcagcact aagtcctcct cttgggtctt ctccaggctc tcctgggagc
840
cagagtttga gcagtggaga aacagtgccc atccctcgcc cagggcctgc ccaaggagat
900
ggacattcct tacctcccat tgctcgccgc ctgggcccacc accctccaca gtccctaaat
960
gttggcaaac ccctatacca gagtatgaac tgcaagccca tgcagatgta cgtgctggac
1020
attaaagaca ccaaggagaa ggggcgggtc aaatggaaag tatttaatag cagttctgtg
1080
gttggacctc ctgaaaccag cctgcatacc gtggtacaag gcaggggtga actcatcata
1140
tttggaggac tcatggacaa gaaacagaat gtgaagtact atccaaaaac aaacgccttg
1200
tactttgtac gagcaaagag ataatgtgtt ctaaaccctt ttcttttctt gtggctttta
1260
atttggattt ttccagtgtg taagcatttg gactgagaat tgggaaaaca aaattactcc
1320
cagaagccaa aactctttta ttcccaaccg aagtcactcc aggctgggat caaatctcca
1380
ttaagaaaaa aaattatata taaatatata tatatatatt atatagccaa ctctgttgac
1440
aaaaaaaggg agagatttcc atcctgggtc agataaagtt gttgctgtgt ttttaacaggg
1500
gctgggctgc ctttttctac cttgctggta actagaccaa gaagttagag aatagactaa
1560
catcagtaac ttcccaaaag aaactgaaga gccccctgta aatctttatg tggccttctt
1620
ggagttaaaa aatgaaaggg catatgtaag ttgcaaagggt ggagggtttt agactctcat
1680

gcttcaggtg ctgtcggggg aaaagtaact gtttttcccc ttctcttaaa accacagagg
 1740
 acctgtgaca gctctgcaga aatgccagtg cctggccccc tcttgccctt tatggctgag
 1800
 gaaagttacc caacaaagga ttttattcca catttgtgtg ccgggtcatt gtgaaataat
 1860
 gtttatgcag ccaacatctg aaaaaaaaaa aaaaaaa
 1897

<210> 5690
 <211> 54
 <212> PRT
 <213> Homo sapiens

<400> 5690
 Thr Ile Arg Ile Ile Glu Glu Cys Glu His Trp Ser Phe Val Phe Gln
 1 5 10 15
 Val Gly Gln Cys Val Val Val Phe Ser Gln Ala Pro Ser Gly Arg Ala
 20 25 30
 Pro Leu Ser Pro Ser Leu Asn Ser Arg Pro Ser Pro Ile Ser Ala Thr
 35 40 45
 Xaa Ser Ser Ser Arg Ser
 50

<210> 5691
 <211> 1227
 <212> DNA
 <213> Homo sapiens

<400> 5691
 aagcggaaaa acaattgcc a tggcaaccac attgagatgc aggccatggc agagatgtac
 60
 aaccgtcctg tggaggtgta ccagtacagc acagaaccca tcaacacatt ccatgggata
 120
 catcaaaacg aggacgaacc cattcgtggt agctaccatc ggaatatcca ctataattca
 180
 gtggtgaatc ctaacaaggc caccattggt gtggggctgg gctgccatca ttcaaaccag
 240
 ggtttgcaga gcagtctctg atgaagaatg ccataaaaac atcggaggag tcatggattg
 300
 aacagcagat gctagaagac aagaaacggg ccacagactg ggaggccaca aatgaagcca
 360
 tcgaggagca ggtggctcgg gaatcctacc tgcagtgggt gcgggatcag gagaaacagg
 420
 ctcgccaggt ccgaggcccc agccagcccc ggaaagccag cgccacatgc agttcggcca
 480
 cagcagcagc ctccagtggc ctggaggagt ggactagccg gtccccgcgg cagcggagtt
 540
 cagcctcgtc acctgagcac cctgagctgc atgctgaatt gggcatgaag ccccttccc
 600
 caggcaactgt tttagctctt gccaaacctc cttgcacctg tgcgccaggt acaagcagtc
 660
 agttctcggc aggggcccag cgggcaactt ccccccttgt gtccctctac cctgctttgg
 720

agtgccgggc cctcattcag cagatgtccc cctctgcctt tggctctgaat gactgggatg
 780
 atgatgagat cctagcttcg gtgctggcag tgtcccaaca ggaataccta gacagtatga
 840
 agaaaaacaa agtgcacaga gacccgcccc cagacaagag ttgatggaga cccagggatt
 900
 ggacaccatc tcccaacccc agggattcgg gcaaggggtgc cgaagataga caagagggcac
 960
 acagagacag accaactggc agccaggcag cccagagga gagagacatt cagacagagg
 1020
 aaagtctccc tgcccctcat tccttccaag atgagaaaaa cttgccgcca cccccgaca
 1080
 ctgatgccag ggaggtggga ggaagaagtg ggaaatttcc cttcccagta cccccaagaa
 1140
 cgtctgagcc ttcaatgttg aattttttct ttattaaaat tactttttatc ttataaaaatc
 1200
 aactaatcaa aaatgaaaaa aaaaaaa
 1227

<210> 5692

<211> 86

<212> PRT

<213> Homo sapiens

<400> 5692

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Arg | Lys | Asn | Asn | Cys | His | Gly | Asn | His | Ile | Glu | Met | Gln | Ala | Met |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Glu | Met | Tyr | Asn | Arg | Pro | Val | Glu | Val | Tyr | Gln | Tyr | Ser | Thr | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Ile | Asn | Thr | Phe | His | Gly | Ile | His | Gln | Asn | Glu | Asp | Glu | Pro | Ile |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | Val | Ser | Tyr | His | Arg | Asn | Ile | His | Tyr | Asn | Ser | Val | Val | Asn | Pro |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Asn | Lys | Ala | Thr | Ile | Gly | Val | Gly | Leu | Gly | Cys | His | His | Ser | Asn | Gln |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Gly | Leu | Gln | Ser | Ser | Leu | | | | | | | | | | |
| | | | | | 85 | | | | | | | | | | |

<210> 5693

<211> 389

<212> DNA

<213> Homo sapiens

<400> 5693

nacgcgtgtg ggatacccct tcgcggggac agccaggcag aaagacgctg ctctcctcgc
 60
 gacactgggg cacctctgcg cctgtcccaa ggccacgctg gctctcttca ggcccatggc
 120
 tccaaccccg cagggcccct cgtcggggcg tcccaactta gtcgtcccct gacgcggcct
 180
 ctgggcccct cggggttggg gagctgacgg cagcttcccc ccacaggtgc ctctgagcct
 240
 cggaacatga tctacatgag ccgcttgggt atctggggcg agggcacacc cttccggaac
 300

tttgaggagt tctgcacgc catcgagaag aggggcgttg gcgccatgga gatcgtggcc
 360
 atggacatga aggtcagcgg gcatgtaca
 389

<210> 5694
 <211> 60
 <212> PRT
 <213> Homo sapiens

<400> 5694
 Arg Gln Leu Pro Pro Thr Gly Ala Ser Glu Pro Arg Asn Met Ile Tyr
 1 5 10 15
 Met Ser Arg Leu Gly Ile Trp Gly Glu Gly Thr Pro Phe Arg Asn Phe
 20 25 30
 Glu Glu Phe Leu His Ala Ile Glu Lys Arg Gly Val Gly Ala Met Glu
 35 40 45
 Ile Val Ala Met Asp Met Lys Val Ser Gly His Val
 50 55 60

<210> 5695
 <211> 1417
 <212> DNA
 <213> Homo sapiens

<400> 5695
 gtggccctcc accggtcatt gaagcctcaa ggtcagggtgg gtgagcagga ggaggctggg
 60
 gccttgccggc aagccctaac cttttccctg ttggagcagc ccccggttga ggcagaagag
 120
 cccccagata gggggactga tggcaaggcc cagctgggtgg tgcactcggc ctttgagcag
 180
 gatgtggagg agctggaccg ggcgctcagg gctgccttgg aggtccacgt ccaggaggag
 240
 acggtggggc cctggcgccg cacactgcct gcagagctgc gtgctcgcct ggagcgggtgc
 300
 catggtgtga gtgttgccct gcgtggtgac tgcacccatcc tccgtggctt cggggccac
 360
 cctgcccgtg ctgcccgcca cttggtggca cttctggtg gcccctggga tcagagtttg
 420
 gcctttccct tggcagcttc aggccctacc ttggcggggc agacgctgaa ggggccctgg
 480
 aacaacctgg agcgtctggc agagaacacc ggggagttcc aggaggtggg gcgggccttc
 540
 tacgacaccc tggacgctgc ccgcagcagc atccgcgtcg ttcgtgtgga gcgcgtgtcg
 600
 caccgctgc tgcagcagca gtatgagctg taccgggagc gcctgctgca gcgatgcgag
 660
 cggcgcccg tggagcagg gctgtaccac ggcacgacgg caccggcagt gcctgacatc
 720
 tgcgcccacg gcttcaaccg cagcttctgc ggccgcaacg ccacggtcta cgggaagggc
 780
 gtgtatttcg ccaggcgcgc ctccctgtcg gtgcaggacc gctactcgcc cccaacgcc
 840

gatggccata aggcgggtgtt cgtggcacgg gtgctgactg gcgactacgg gcagggccgc
 900
 cgcggtctgc gggcgccccc tctgcggggt cctggccacg tgctcctgcg ctacgacagc
 960
 gccgtggact gcattctgcc gccagcattc ttctcatct tccacgacac ccaggcgctg
 1020
 cccaccacc tcattcacctg cgagcacgtg ccccgcgctt ccccgacga cccctctggg
 1080
 ctcccgggcc gctcccaga cacttaaccg aagggggccac cctctggcct cctgcttccc
 1140
 aggtctccag ctccgcacag gctgatgctc cccgccccca actgtggccg cctgagctgt
 1200
 ccccggggac gccctgcat cctctgcgg gctccagaag gcggtgtggg ggatggcggt
 1260
 cagcagcggc cgaggggggc cgggctaggt ccagcctgg gccgacccca ccaccagggg
 1320
 tcagcagagc ccaggagcga caccgcccgc ccgcgctcc cagacctgc ccgagtcggc
 1380
 tctgttgttt gaataaacgt gaacgtgaac ccagaaa
 1417

<210> 5696

<211> 368

<212> PRT

<213> Homo sapiens

<400> 5696

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ala | Leu | His | Arg | Ser | Leu | Lys | Pro | Gln | Gly | Gln | Val | Gly | Glu | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Glu | Ala | Gly | Ala | Leu | Arg | Gln | Ala | Leu | Thr | Phe | Ser | Leu | Leu | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Pro | Pro | Leu | Glu | Ala | Glu | Glu | Pro | Pro | Asp | Arg | Gly | Thr | Asp | Gly |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Lys | Ala | Gln | Leu | Val | Val | His | Ser | Ala | Phe | Glu | Gln | Asp | Val | Glu | Glu |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Leu | Asp | Arg | Ala | Leu | Arg | Ala | Ala | Leu | Glu | Val | His | Val | Gln | Glu | Glu |
| 65 | | | | | 70 | | | | 75 | | | | 80 | | |
| Thr | Val | Gly | Pro | Trp | Arg | Arg | Thr | Leu | Pro | Ala | Glu | Leu | Arg | Ala | Arg |
| | | | | 85 | | | | 90 | | | | | 95 | | |
| Leu | Glu | Arg | Cys | His | Gly | Val | Ser | Val | Ala | Leu | Arg | Gly | Asp | Cys | Thr |
| | | | 100 | | | | 105 | | | | | 110 | | | |
| Ile | Leu | Arg | Gly | Phe | Gly | Ala | His | Pro | Ala | Arg | Ala | Ala | Arg | His | Leu |
| | | | 115 | | | 120 | | | | | 125 | | | | |
| Val | Ala | Leu | Leu | Ala | Gly | Pro | Trp | Asp | Gln | Ser | Leu | Ala | Phe | Pro | Leu |
| | | | 130 | | | 135 | | | 140 | | | | | | |
| Ala | Ala | Ser | Gly | Pro | Thr | Leu | Ala | Gly | Gln | Thr | Leu | Lys | Gly | Pro | Trp |
| 145 | | | | | 150 | | | | 155 | | | | | 160 | |
| Asn | Asn | Leu | Glu | Arg | Leu | Ala | Glu | Asn | Thr | Gly | Glu | Phe | Gln | Glu | Val |
| | | | | 165 | | | | 170 | | | | | 175 | | |
| Val | Arg | Ala | Phe | Tyr | Asp | Thr | Leu | Asp | Ala | Ala | Arg | Ser | Ser | Ile | Arg |
| | | | 180 | | | | 185 | | | | | 190 | | | |
| Val | Val | Arg | Val | Glu | Arg | Val | Ser | His | Pro | Leu | Leu | Gln | Gln | Gln | Tyr |
| | | | 195 | | | 200 | | | | | | 205 | | | |
| Glu | Leu | Tyr | Arg | Glu | Arg | Leu | Leu | Gln | Arg | Cys | Glu | Arg | Arg | Pro | Val |

| | | | | |
|---|-----|-----|-----|-----|
| 210 | | 215 | | 220 |
| Glu Gln Val Leu Tyr His Gly Thr Thr Ala Pro Ala Val Pro Asp Ile | | | | |
| 225 | | 230 | | 240 |
| Cys Ala His Gly Phe Asn Arg Ser Phe Cys Gly Arg Asn Ala Thr Val | | | | |
| | 245 | | 250 | 255 |
| Tyr Gly Lys Gly Val Tyr Phe Ala Arg Arg Ala Ser Leu Ser Val Gln | | | | |
| | 260 | | 265 | 270 |
| Asp Arg Tyr Ser Pro Pro Asn Ala Asp Gly His Lys Ala Val Phe Val | | | | |
| | 275 | | 280 | 285 |
| Ala Arg Val Leu Thr Gly Asp Tyr Gly Gln Gly Arg Arg Gly Leu Arg | | | | |
| | 290 | | 295 | 300 |
| Ala Pro Pro Leu Arg Gly Pro Gly His Val Leu Leu Arg Tyr Asp Ser | | | | |
| 305 | | 310 | | 320 |
| Ala Val Asp Cys Ile Cys Gln Pro Ser Ile Phe Val Ile Phe His Asp | | | | |
| | 325 | | 330 | 335 |
| Thr Gln Ala Leu Pro Thr His Leu Ile Thr Cys Glu His Val Pro Arg | | | | |
| | 340 | | 345 | 350 |
| Ala Ser Pro Asp Asp Pro Ser Gly Leu Pro Gly Arg Ser Pro Asp Thr | | | | |
| | 355 | | 360 | 365 |

<210> 5697

<211> 3362

<212> DNA

<213> Homo sapiens

<400> 5697

gtatccaatt caaagaatac aaaagggtat acagagaagt tggcctccct cctaccctgt
 60
 ccttcagcca ccagtgatga tgattcacgg ttcttcactg caccagcca agggtagaca
 120
 tgggtcccaa aacctccgtg cctgaggaaa ggagcacgtt ttcctatgtg tgcaaagggtg
 180
 ccatgtgctg ttgcagggtt gaaatgaggg gagtcttctt caagaagtca ggagagggggg
 240
 agtcttccaa tgaattcatc tttccttccc cccaaccatt cccctcttgg cttttctaga
 300
 atgttcgtgg catcagagag aaagatgaga gctcaccagg tgctcacctt cctcctgctc
 360
 ttcgtgatca cctcggtggc ctctgaaaac gccagcacat cccgaggctg tgggctggac
 420
 ctccctccctc agtacgtgtc cctgtgctgac ctggacgcca tctggggcat tgtgggtggag
 480
 gcggtggccg gggcgggcgc cctgatcaca ctgctcctga tgctcactc cctgggtgagg
 540
 ctgcccttca tcaaggagaa ggagaagaag agccctgtgg gcctccactt tctgttctc
 600
 ctggggaccc tgggcctctt tgggctgacg tttgccttca tcatccagga ggacgagacc
 660
 atctgctctg ttcgccgctt cctctggggc gtcctctttg cgctctgctt ctccctgctg
 720
 ctgagccagg catggcgctg gcggaggctg gtgcggcatg gcacggggcc cgcgggctgg
 780
 cagctggtgg gcctggcgct gtgcctgatg ctggtgcaag tcatcatcgc tgtggagtgg
 840

ctggtgctca ccgtgctgcg tgacacaagg ccagcctgcg cctacgagcc catggacttt
900
gtgatggccc tcatctacga catggtactg cttgtgggtca ccctggggct ggccctcttc
960
actctgtgcg gcaagttcaa gaggtggaag ctgaacgggg ccttcctcct catcacagcc
1020
ttcctctctg tgctcatctg ggtggcctgg atgaccatgt acctcttcgg caatgtcaag
1080
ctgcagcagg gggatgcctg gaacgacccc accttggcca tcacgctggc ggccagcggc
1140
tgggtcttcg tcatcttcca cgccatccct gagatccact gcacccttct gccagccctg
1200
caggagaaca cgcccaacta cttcgacacg tcgcagccca ggatgcggga gacggccttc
1260
gaggaggacg tgcagctgcc gcgggcctat atggagaaca aggcttctc catggatgaa
1320
cacaatgcag ctctccgaac agcaggattt cccaacggca gcttgggaaa aagaccagt
1380
ggcagcttgg ggaaaagacc cagcgctccg tttagaagca acgtgtatca gccaaactgag
1440
atggccgctg tgctcaacgg tgggaccatc ccaactgctc cgccaagtca cacaggaaga
1500
cacctttggt gaaagacttt aagttccaga gaatcagaat ttctcttacc gatttgctc
1560
cctggctgtg tctttcttga gggagaaatc ggtaacagtt gccgaaccag gccgcctcac
1620
agccaggaaa tttggaaatc ctagccaagg ggatttcgtg taaatgtgaa cactgacgaa
1680aacaccgact gcccgccct cccctgccac acacacagac acgtaatacc 1740
agaccaacct caatccccgc aaactaaagc aaagctaatt gcaaatagta ttaggctcac
1800
tggaaaatgt ggctgggaag actgtttcat cctctggggg tagaacagaa ccaaattcac
1860
agctggtggg ccagactggt gttggttggg ggtggggggc tcccactctt atcacctctc
1920
cccagcaagt gctggacccc aggtagcctc ttggagatga ccgttgcgtt gaggacaaat
1980
ggggactttg ccaccggctt gcctggtggt ttgcacattt caggggggctc aggagagtta
2040
aggaggttgt ggggtgggatt ccaaggtgag gcccaactga atcgtggggg gagctttata
2100
gccagtagag gtggagggac cctggcatgt gccaaagaag aggccctctg ggtgatgaag
2160
tgaccatcac atttgaaaag tgatcaacca ctgttccttc tatggggctc ttgctctagt
2220
gtctatggtg agaacacagg ccccgccct tccctttag agccatagaa atattctggc
2280
ttggggcagc agtcccttct tcccttgatc atctcgccct gttcctacac ttacgggtgt
2340
atctccaaat cctctcccaa ttttattccc ttattcattt caagagctcc aatgggggtct
2400
ccagctgaaa gccctccgg gaggcagggt ggaaggcagg caccacggca ggttttccgc
2460
gatgatgtca cctagcaggg cttcaggggt tcccactagg atgcagagat gacctctcgc
2520

tgcctcaciaa gcagtgcac ctcgggtcct ttccgttgct atggtgaaaa ttcttgatg
 2580
 gaatggatca catgagggtt tcttggtgct tttggagggt gtgggggata ttttgttttg
 2640
 gtttttctgc aggttccatg aaaacagccc tttccaagc ccattgtttc tgtcatgggt
 2700
 tccatctgtc ctgagcaagt ctttcctttg ttatttagca tttcgaacat ctcggccatt
 2760
 caaagccccc atgttctctg cactgtttgg ccagcataac ctctagcatc gattcaaagc
 2820
 agagttttta cctgacggca tggaatgtat aaatgagggt gggtccttct gcagatactc
 2880
 taatcactac attgcttttt ctataaaact acccataagc ctttaacctt taaagaaaaa
 2940
 tgaaaaaggt tagtgtttgg gggccggggg aggactgacc gcttcataag ccagtacgtc
 3000
 tgagctgagt atgtttcaat aaaccttttg atattttctca aggcctagt ctctgctgtc
 3060
 tccccctccc accccatcct tgcaaagcac tggggaaagt aaggccaatc tggccctccc
 3120
 tgtgtgaccc gccttcgagt tttccttaac agttagtaca tttccttggt ttaccacgca
 3180
 cggggaagaa aacgcatggc ccagaatgc cccccccacc tgacctcccc ggaagcacc
 3240
 cgcctctgcc cagagcatgt gcttgcttct agagaatccc gttccagtca ttgcgtggac
 3300
 agaaaacgta agagtccctgg ggaggggtgg gagggaaatga agctaggacc tggggtcggg
 3360
 gt
 3362

<210> 5698
 <211> 403
 <212> PRT
 <213> Homo sapiens

<400> 5698
 Met Phe Val Ala Ser Glu Arg Lys Met Arg Ala His Gln Val Leu Thr
 1 5 10 15
 Phe Leu Leu Leu Phe Val Ile Thr Ser Val Ala Ser Glu Asn Ala Ser
 20 25 30
 Thr Ser Arg Gly Cys Gly Leu Asp Leu Leu Pro Gln Tyr Val Ser Leu
 35 40 45
 Cys Asp Leu Asp Ala Ile Trp Gly Ile Val Val Glu Ala Val Ala Gly
 50 55 60
 Ala Gly Ala Leu Ile Thr Leu Leu Leu Met Leu Ile Leu Leu Val Arg
 65 70 75 80
 Leu Pro Phe Ile Lys Glu Lys Glu Lys Lys Ser Pro Val Gly Leu His
 85 90 95
 Phe Leu Phe Leu Leu Gly Thr Leu Gly Leu Phe Gly Leu Thr Phe Ala
 100 105 110
 Phe Ile Ile Gln Glu Asp Glu Thr Ile Cys Ser Val Arg Arg Phe Leu
 115 120 125
 Trp Gly Val Leu Phe Ala Leu Cys Phe Ser Cys Leu Leu Ser Gln Ala

| | | |
|---|-----|-----|
| 130 | 135 | 140 |
| Trp Arg Val Arg Arg Leu Val Arg His Gly Thr Gly Pro Ala Gly Trp | | |
| 145 | 150 | 155 |
| Gln Leu Val Gly Leu Ala Leu Cys Leu Met Leu Val Gln Val Ile Ile | | 160 |
| | 165 | 170 |
| Ala Val Glu Trp Leu Val Leu Thr Val Leu Arg Asp Thr Arg Pro Ala | | 175 |
| | 180 | 185 |
| Cys Ala Tyr Glu Pro Met Asp Phe Val Met Ala Leu Ile Tyr Asp Met | | 190 |
| | 195 | 200 |
| Val Leu Leu Val Val Thr Leu Gly Leu Ala Leu Phe Thr Leu Cys Gly | | 205 |
| | 210 | 215 |
| Lys Phe Lys Arg Trp Lys Leu Asn Gly Ala Phe Leu Leu Ile Thr Ala | | 220 |
| 225 | 230 | 235 |
| Phe Leu Ser Val Leu Ile Trp Val Ala Trp Met Thr Met Tyr Leu Phe | | 240 |
| | 245 | 250 |
| Gly Asn Val Lys Leu Gln Gln Gly Asp Ala Trp Asn Asp Pro Thr Leu | | 255 |
| | 260 | 265 |
| Ala Ile Thr Leu Ala Ala Ser Gly Trp Val Phe Val Ile Phe His Ala | | 270 |
| | 275 | 280 |
| Ile Pro Glu Ile His Cys Thr Leu Leu Pro Ala Leu Gln Glu Asn Thr | | 285 |
| | 290 | 295 |
| Pro Asn Tyr Phe Asp Thr Ser Gln Pro Arg Met Arg Glu Thr Ala Phe | | 300 |
| 305 | 310 | 315 |
| Glu Glu Asp Val Gln Leu Pro Arg Ala Tyr Met Glu Asn Lys Ala Phe | | 320 |
| | 325 | 330 |
| Ser Met Asp Glu His Asn Ala Ala Leu Arg Thr Ala Gly Phe Pro Asn | | 335 |
| | 340 | 345 |
| Gly Ser Leu Gly Lys Arg Pro Ser Gly Ser Leu Gly Lys Arg Pro Ser | | 350 |
| | 355 | 360 |
| Ala Pro Phe Arg Ser Asn Val Tyr Gln Pro Thr Glu Met Ala Val Val | | 365 |
| | 370 | 375 |
| Leu Asn Gly Gly Thr Ile Pro Thr Ala Pro Pro Ser His Thr Gly Arg | | 380 |
| 385 | 390 | 395 |
| His Leu Trp | | 400 |

<210> 5699

<211> 1565

<212> DNA

<213> Homo sapiens

<400> 5699

tttttttttt tttttttttt tttttttttt ttttttcata gtgaaacccat tttctagaaa

60

atcaaatatt ttattttcat taaaaaaaaa ccttgaataa taggaatcat tttacacatt

120

aatggttgct cttaaaagt tagaatctca agagatacca aaagcactta agagttacca

180

ccacattttg cccaagttct aaggaaagt ctgaaactta gtggtggtgt gtttgacttc

240

agcaagctcc agacagtctg agttgctcat tccatgaaca gaagcttgaa aatgccctta

300

cagttgagat ataaacgagg gaagaggtga agctttcagg aagccagaga gccctgccc

360

gtcagggtttc ctgaggaagg caggggtgct ctatgctcat cagtcattca agcttctcag
 420
 gaaatgtgcc catcatggga acagcagcta tcttccaagc ttaaaaatta tgaatcccag
 480
 gaagttaaag cccaaccagc caaccacctt cacatccttc tcatactagt agagtcattc
 540
 aaaacagcaa gtggtgcttc tgaggcagcc tcaggaagggt ctttgggtgg ctattctaga
 600
 ggtgaacata ctggaaagggt ttttacctaa agcattttca gttgaaatga aaaaagaagg
 660
 aaagctccaa aagtcagttt caaattcttt cagtgtgct cccagagaag tccgtgtgca
 720
 aagggtgat gttctggtca taagcggcat actcagagggt gccggtactg gccagcttga
 780
 gctgctgggc agcatgggtc agctggaatg cagcatcagg gtgggctgtc tcaggcagca
 840
 gtgtgcattc ctttccagc atgtcagcca cccctttcag cagggtccagg aaaccaaagg
 900
 ctagagcggc ctttcgcaaa cggttcagct ccttatagaa tgtctgtgtt ttttcaggta
 960
 gtttccttgc atttcttaaa atcttctgta catctgtctg caggccgctg ggtttgatcc
 1020
 agacagtcac attctgggca taactgcgtt tgtttttggg ctgtaggggg aatggactct
 1080
 tattgtcatc ctgcgcataa gggttttctt tagcatctga aataggaccc aactgtgcca
 1140
 ttttccctag ccatgggaga ggttctgggc caggctcaaa gagagacatc atgaggtttg
 1200
 atttcttctt gctgtcagct tgggagtaga gcattccatg ccattcagga cctaattgaa
 1260
 caatcgctac cattccttcc acttttaggc taccatggag caggacacaa aagttgggta
 1320
 ttttgctgc aatctgattg gctgaattct catcttcatt gtcatcagt atgccagcac
 1380
 ccacctcatc accttctttg ttaagtgcta tgggcaagac cagatgcctg gacagaactg
 1440
 ggggacttga aatatcagct atatcaataa atcccactat ttccaaatct gtgttaatga
 1500
 ctttagggat aggatcaatt tttcatcta caacaaaagg ttctggcctg ggaagactt
 1560
 gtacc
 1565

<210> 5700

<211> 197

<212> PRT

<213> Homo sapiens

<400> 5700

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Val | Ala | Ile | Val | Gln | Leu | Gly | Pro | Glu | Trp | His | Gly | Met | Leu | Tyr |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Ser | Gln | Ala | Asp | Ser | Lys | Lys | Lys | Ser | Asn | Leu | Met | Met | Ser | Leu | Phe |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Pro | Gly | Pro | Glu | Pro | Leu | Pro | Trp | Leu | Gly | Lys | Met | Ala | Gln | Leu |

```
<210> 5701
<211> 1885
<212> DNA
<213> Homo sapiens
```

```

<400> 5701
gccttgcaca tggagatgct tagctgaggg ggtggccttg ttagactatt tgcaggtcgt
60
gagatagagc ctgagatggg ggactggggc cctgcctggg ggattggggtc gtgacctgtg
120
tggagcccca cactgagctg cagtgggttg ggaggggtgg ttacaggggt gctctgtgca
180
gccctctga ttttcccctg ggagtcccag gtccagggga aggaggacag tggcccaggc
240
cacacagctc actgggcggc tctcactccc ccagggtctg ctgctggcgg gatggacacc
300
ctggaggagg tgacttgggc caatgggagc acagcgctac cccacccct ggcaccaaac
360
atcagtgtgc ctcatcgctg cctgctgctg ctctacgaag acattggcac ctccagggtc
420
cggtagctggg acctcttgct gctcatcccc aatgtgctct tctcatctt cctgctctgg
480
aagcttccat ctgctcgggc gaagatccgc atcacctcca gccccatttt tatcaccttc
540
tacctctgg tgtttgtggg ggcgctggtg ggcattgcc gggccgtggg atccatgacg
600
gtgagcacct cgaacgctgc aactgttgct gataagatcc tgtgggagat caccgccttc
660
ttcctgctgg ccacgagct gagtgtgatc atcctgggcc tggccttttg ccacctggag
720
agtaagtcca gcatcaagcg ggtgctggcc atcaccacag tgctgtccct ggctactct
780

```


gtcaccaggg ggaccctgga gatcctgtac cctgatgccc atctctcagc tgaggacttt
 840
 aatatctatg gccatggggg ccgccagttc tggctgggtca gctcctgctt cttcttcttg
 900
 gtctactctc tgggtgggtcat ccttcccaag accccgctga aggagcgcac ctccctgcct
 960
 tctcggagga gcttctacgt gtatgcgggc atcctggcac tgctcaacct actgcagggg
 1020
 ctggggagtg tgctgctgtg cttegacatc atcgaggggc tctgctgtgt agatgccaca
 1080
 accttctgt acttcagctt cttegctccg ctcatctacg tggcttttct ccggggcttc
 1140
 ttcggctcgg agcccaagat cctcttctc ctacaaatgc caagtggacg agacagagga
 1200
 gccagatgta cacctacccc agccctacgc tgtggcccgg cgggagggcc tggaggctgc
 1260
 aggggctgct ggggcctcag ctgccagcta ctcgagcacg cagttcgact ctgccggcgg
 1320
 ggtggcctac ctggatgaca tcgcttccat gccctgccac actggcagca tcaacagcac
 1380
 agacagcgag cgctggaagg ccatcaatgc ctgagggcag ctgccagggc ctgtggagga
 1440
 caggccagag aggaggccag caggcccaga gtccccaggg gaggaggacc aggtcaaggg
 1500
 acgttctgtg ggcagtagcc ctgtgtggcc ctgttcccac catgagtctg gaggccccac
 1560
 ctccctgggg ctcccaatcc cctttgccat ctctgctctc actggggacc ctccctccct
 1620
 tcccacctgc tctcatactg ctcagtgaca tggcccaggc tttccttcca gggccatgct
 1680
 tggcaagggt ggctgagggc accctccttc tctgcacct tggcacgagg gcagggctgg
 1740
 ctctcccaat gcctccatcc catcccatg gtgctttggc ctccctcaaag catccaccat
 1800
 ggtggatgga ctgaagtgtg tatatcttct tgatctatct ttaataaaa aggaaaagga
 1860
 gcagaaaaaa aaaaaaaaag ttttg
 1885

<210> 5702

<211> 348

<212> PRT

<213> Homo sapiens

<400> 5702

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Thr | Leu | Glu | Glu | Val | Thr | Trp | Ala | Asn | Gly | Ser | Thr | Ala | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Pro | Pro | Leu | Ala | Pro | Asn | Ile | Ser | Val | Pro | His | Arg | Cys | Leu | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Leu | Tyr | Glu | Asp | Ile | Gly | Thr | Ser | Arg | Val | Arg | Tyr | Trp | Asp | Leu |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Leu | Leu | Leu | Ile | Pro | Asn | Val | Leu | Phe | Leu | Ile | Phe | Leu | Leu | Trp | Lys |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Leu | Pro | Ser | Ala | Arg | Ala | Lys | Ile | Arg | Ile | Thr | Ser | Ser | Pro | Ile | Phe |

| | | | | | | |
|---|---|-----|-----|-----|-----|-----|
| 65 | | 70 | | 75 | | 80 |
| Ile Thr Phe Tyr | Ile Leu Val Phe Val Val Ala Leu Val Gly Ile Ala | | | | | |
| | 85 | | 90 | | 95 | |
| Arg Ala Val Val Ser Met Thr Val Ser Thr Ser Asn Ala Ala Thr Val | | | | | | |
| | 100 | | 105 | | 110 | |
| Ala Asp Lys Ile Leu Trp Glu Ile Thr Arg Phe Phe Leu Leu Ala Ile | | | | | | |
| | 115 | | 120 | | 125 | |
| Glu Leu Ser Val Ile Ile Leu Gly Leu Ala Phe Gly His Leu Glu Ser | | | | | | |
| | 130 | | 135 | | 140 | |
| Lys Ser Ser Ile Lys Arg Val Leu Ala Ile Thr Thr Val Leu Ser Leu | | | | | | |
| 145 | | 150 | | 155 | | 160 |
| Ala Tyr Ser Val Thr Gln Gly Thr Leu Glu Ile Leu Tyr Pro Asp Ala | | | | | | |
| | 165 | | 170 | | 175 | |
| His Leu Ser Ala Glu Asp Phe Asn Ile Tyr Gly His Gly Gly Arg Gln | | | | | | |
| | 180 | | 185 | | 190 | |
| Phe Trp Leu Val Ser Ser Cys Phe Phe Phe Leu Val Tyr Ser Leu Val | | | | | | |
| | 195 | | 200 | | 205 | |
| Val Ile Leu Pro Lys Thr Pro Leu Lys Glu Arg Ile Ser Leu Pro Ser | | | | | | |
| | 210 | | 215 | | 220 | |
| Arg Arg Ser Phe Tyr Val Tyr Ala Gly Ile Leu Ala Leu Leu Asn Leu | | | | | | |
| 225 | | 230 | | 235 | | 240 |
| Leu Gln Gly Leu Gly Ser Val Leu Leu Cys Phe Asp Ile Ile Glu Gly | | | | | | |
| | 245 | | 250 | | 255 | |
| Leu Cys Cys Val Asp Ala Thr Thr Phe Leu Tyr Phe Ser Phe Phe Ala | | | | | | |
| | 260 | | 265 | | 270 | |
| Pro Leu Ile Tyr Val Ala Phe Leu Arg Gly Phe Phe Gly Ser Glu Pro | | | | | | |
| | 275 | | 280 | | 285 | |
| Lys Ile Leu Phe Xaa Leu Gln Met Pro Ser Gly Arg Asp Arg Gly Ala | | | | | | |
| | 290 | | 295 | | 300 | |
| Arg Cys Thr Pro Thr Pro Ala Leu Arg Cys Gly Pro Ala Gly Gly Pro | | | | | | |
| 305 | | 310 | | 315 | | 320 |
| Gly Gly Cys Arg Gly Cys Trp Gly Leu Ser Cys Gln Leu Leu Glu His | | | | | | |
| | 325 | | 330 | | 335 | |
| Ala Val Arg Leu Cys Arg Arg Gly Gly Leu Pro Gly | | | | | | |
| | 340 | | 345 | | | |

<210> 5703

<211> 1496

<212> DNA

<213> Homo sapiens

<400> 5703

nggctcacca cacggcaagg tgcccgttc caagctgacc ccaccagcac tcagacacgc

60

atgcacacac acacgcagac ctactatgaa ctggcttggtg ctcagcaaga gcagaattga

120

tgagcagata ccttaagaat cttttagagc aggaccacgt acaagggcaa atcctccttc

180

cagacctact cggactacct gcgctgggag agcttcctcc agcagcagct gcaggccttg

240

cccgagggct cagtcctgcg ccggggcttc cagacctgcg agcactggaa gcagatatcc

300

atggaaatcg taggggtgca gagcgccctg tgcggcctgg tgctatccct gctcatctgc

360

gtggccgcgg tggccgtgtt caccacccac atcctgctcc tgctgcccgt gtcctcagc
 420
 atcttgggca tcgtgtgcct ggtggtgacc atcatgtact ggagcggctg ggagatgggg
 480
 gctgtggaag ccattctcct gtccatcctc gttggctcct ccgtggatta ctgcgtccac
 540
 ctggctgagg gctacctgct ggctggagag aacctgcccc cccaccaggc cgaggacgcc
 600
 cgaacgcagc gccagtggcg tacgctggag gccgtgcggc acgtgggctg ggccatcgtc
 660
 tccagtggcc tcaccacggt catcgccaca gtgccccctc tcttctgcat catcgcccca
 720
 tttgccaagt tcggcaagat tgtggcactc aacacgggcg tgtccatcct ctacacgctg
 780
 accgtcagca ccgccctgct gggcatcatg gcgccagct ctttactcg gaccggact
 840
 tccttctca aggccctggg tgccgtgctg ctggcagggg ccctggggct ggggtgctgc
 900
 ctgctgctcc tgcaagcgg ctataagatt cccctgcccg caggggcctc cctatagccc
 960
 gggacgggct ctggacactt gcacctttgg tcccatgggt gggggacagg agctgcttcc
 1020
 cagctcgact tcagctagct gtgtccccag gcctggggcc agggcgccct gcgggccagc
 1080
 gtggaggctg acacccacac agatggtgtg gaccatgctg ccttgtggag ctgggagttg
 1140
 gagacagccg ccaccccaca ggccgggcta ctggcagcca cactcggctt tttgccagt
 1200
 ggcagaagag accagccctc ctcccatgcc cggtcacat gggggtcagg ttatTTTTgt
 1260
 aggggggtct cctctcacac tgcctcagtg ctcaaacct tccagtgtgg atgttacagg
 1320
 gtggccccca ttctaccgat gtgaaaactg agggccagg acacagtggc tgccctgtcg
 1380
 ctggatcagt agcagagcca gagctgcctc cgagcgccat gccgccctcg ggaatcatac
 1440
 aggaagagca cagtggatcc aggggtgggg cctctcacc cctaaccctg cccccc
 1496

<210> 5704

<211> 269

<212> PRT

<213> Homo sapiens

<400> 5704

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Arg | Thr | Thr | Tyr | Lys | Gly | Lys | Ser | Ser | Phe | Gln | Thr | Tyr | Ser | Asp |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Tyr | Leu | Arg | Trp | Glu | Ser | Phe | Leu | Gln | Gln | Leu | Gln | Ala | Leu | Pro | |
| | | 20 | | | | | | 25 | | | | 30 | | | |
| Glu | Gly | Ser | Val | Leu | Arg | Arg | Gly | Phe | Gln | Thr | Cys | Glu | His | Trp | Lys |
| | | 35 | | | | | 40 | | | | 45 | | | | |
| Gln | Ile | Phe | Met | Glu | Ile | Val | Gly | Val | Gln | Ser | Ala | Leu | Cys | Gly | Leu |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Val | Leu | Ser | Leu | Leu | Ile | Cys | Val | Ala | Ala | Val | Ala | Val | Phe | Thr | Thr |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65 | | | | | 70 | | | | | 75 | | | | 80 |
| His | Ile | Leu | Leu | Leu | Leu | Pro | Val | Leu | Leu | Ser | Ile | Leu | Gly | Ile |
| | | | | 85 | | | | | 90 | | | | | 95 |
| Cys | Leu | Val | Val | Thr | Ile | Met | Tyr | Trp | Ser | Gly | Trp | Glu | Met | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | |
| Val | Glu | Ala | Ile | Ser | Leu | Ser | Ile | Leu | Val | Gly | Ser | Ser | Val | Asp |
| | | 115 | | | | | 120 | | | | | 125 | | Tyr |
| Cys | Val | His | Leu | Val | Glu | Gly | Tyr | Leu | Leu | Ala | Gly | Glu | Asn | Leu |
| | 130 | | | | | 135 | | | | | 140 | | | Pro |
| Pro | His | Gln | Ala | Glu | Asp | Ala | Arg | Thr | Gln | Arg | Gln | Trp | Arg | Thr |
| 145 | | | | 150 | | | | | 155 | | | | | 160 |
| Glu | Ala | Val | Arg | His | Val | Gly | Val | Ala | Ile | Val | Ser | Ser | Ala | Leu |
| | | | 165 | | | | | 170 | | | | | 175 | Thr |
| Thr | Val | Ile | Ala | Thr | Val | Pro | Leu | Phe | Phe | Cys | Ile | Ile | Ala | Pro |
| | 180 | | | | | | 185 | | | | | 190 | | Phe |
| Ala | Lys | Phe | Gly | Lys | Ile | Val | Ala | Leu | Asn | Thr | Gly | Val | Ser | Ile |
| | 195 | | | | | 200 | | | | | 205 | | | Leu |
| Tyr | Thr | Leu | Thr | Val | Ser | Thr | Ala | Leu | Leu | Gly | Ile | Met | Ala | Pro |
| | 210 | | | | | 215 | | | | | 220 | | | Ser |
| Ser | Phe | Thr | Arg | Thr | Arg | Thr | Ser | Phe | Leu | Lys | Ala | Leu | Gly | Ala |
| 225 | | | | 230 | | | | 235 | | | | | 240 | Val |
| Leu | Leu | Ala | Gly | Ala | Leu | Gly | Leu | Gly | Ala | Cys | Leu | Val | Leu | Leu |
| | | | 245 | | | | 250 | | | | | 255 | | Gln |
| Ser | Gly | Tyr | Lys | Ile | Pro | Leu | Pro | Ala | Gly | Ala | Ser | Leu | | |
| | 260 | | | | | | 265 | | | | | | | |

<210> 5705

<211> 768

<212> DNA

<213> Homo sapiens

<400> 5705

ntggagccgc tgagcccccg ctgcggccgg gagctgcatg ggggagcgcg ggccaggctc
60

gggaagatgc cccggccgga gttgcccttg ccggagggct gggaggaggc gcgcgacttc
120

gacggcaagg tctactacat agaccacacg aaccgcacca ccagctggat cgacccgcgg
180

gacaggtaca ccaaaccact cacctttgct gactgcatta gcgacgagtt gccgctggga
240

tgggaagagg catatgaccc acaggttgga gattacttca tagaccacaa taccaaaacc
300

actcagattg aggatccaag ggtgcaatgg cggcgggagc aggaacatat gctgaaggat
360

tacctggtgg tggcccagga ggctctgagt gcacaaaagg agatctacca ggtgaagcag
420

cagcgctgg agcttgaca gcaggagtac cagcaactgc atgccgtctg ggagcataag
480

ctgggctccc aggtcagctt ggtctctggt tcatcatcca gctccaagta tgacctgag
540

atcctgaaag ctgaaattgc cactgcagtt caaagagcgt ggctttcaga cctgaagaa
600

aatcgataag aaaatgtctg atgctcaggg cagctacaaa ctggatgaag ctcaggctgt
660

cttgagagaa acaaaagcca tcaaaaaggc tattacctgg agagttcgag tttcccgccta
 720
 ccgaaacatt acctggattt tagctcccag acagacatct cggaagc
 768

<210> 5706

<211> 202

<212> PRT

<213> Homo sapiens

<400> 5706

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Glu | Pro | Leu | Ser | Pro | Arg | Cys | Gly | Arg | Glu | Leu | His | Gly | Gly | Ala |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Arg | Ala | Arg | Leu | Gly | Lys | Met | Pro | Arg | Pro | Glu | Leu | Pro | Leu | Pro | Glu |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| Gly | Trp | Glu | Glu | Ala | Arg | Asp | Phe | Asp | Gly | Lys | Val | Tyr | Tyr | Ile | Asp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| His | Thr | Asn | Arg | Thr | Thr | Ser | Trp | Ile | Asp | Pro | Arg | Asp | Arg | Tyr | Thr |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Lys | Pro | Leu | Thr | Phe | Ala | Asp | Cys | Ile | Ser | Asp | Glu | Leu | Pro | Leu | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Trp | Glu | Glu | Ala | Tyr | Asp | Pro | Gln | Val | Gly | Asp | Tyr | Phe | Ile | Asp | His |
| | | | 85 | | | | | | 90 | | | | 95 | | |
| Asn | Thr | Lys | Thr | Thr | Gln | Ile | Glu | Asp | Pro | Arg | Val | Gln | Trp | Arg | Arg |
| | | 100 | | | | | | 105 | | | | 110 | | | |
| Glu | Gln | Glu | His | Met | Leu | Lys | Asp | Tyr | Leu | Val | Val | Ala | Gln | Glu | Ala |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Leu | Ser | Ala | Gln | Lys | Glu | Ile | Tyr | Gln | Val | Lys | Gln | Gln | Arg | Leu | Glu |
| | 130 | | | | | 135 | | | | 140 | | | | | |
| Leu | Ala | Gln | Gln | Glu | Tyr | Gln | Gln | Leu | His | Ala | Val | Trp | Glu | His | Lys |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Leu | Gly | Ser | Gln | Val | Ser | Leu | Val | Ser | Gly | Ser | Ser | Ser | Ser | Ser | Lys |
| | | | 165 | | | | | | 170 | | | | 175 | | |
| Tyr | Asp | Pro | Glu | Ile | Leu | Lys | Ala | Glu | Ile | Ala | Thr | Ala | Val | Gln | Arg |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Ala | Trp | Leu | Ser | Asp | Pro | Glu | Glu | Asn | Arg | | | | | | |
| | | 195 | | | | | 200 | | | | | | | | |

<210> 5707

<211> 6988

<212> DNA

<213> Homo sapiens

<400> 5707

nnctcttggtg ctctctctcta gttttactga actgccagta ctttgaacac actttgtgct
 60
 ttttctctctc caggtctttg tgcatactgt ttcctctgcc tggaatactc ttctttctct
 120
 ttacctgact cgtttctgct cttacttcaa gtctcagatt ctaggaagct ttccatcaac
 180
 ctgctatcac tgggacgagt tggccatccc ctgtgcttct gtagctccta tgaaatcata
 240
 atagttgaaa tgtgatgttt aaatgtttac ttggcattct cctctactga actctaagct
 300

ttgtgaggggt agtgatgggtg gctttgccta ttgttttggt tcccttaaata ctaaacgcag
360
tgcctggcac atagtagcct ccagtaaata cttgtttaat gaacaaacaa acctgtgaag
420
tgagtgatag agtgcttagt ccccttcagt tttcaggatg gagagatgga gaataaggac
480
ctcacacaaa atcacacagt acttggtgga agaagctgag ctatgacctg ccttccttca
540
gaggaatgca ctttgctttg gaagatatga agaaattccc agtacattgt ctttcctatt
600
gggtctgtgt gagaacaggc tgatagatgc ctctgtgtca agctgagctc ccagactctg
660
atacaggctg gggatgatga gaagaaccag aggacgatca ctgtcaacct tgcccacatg
720
gggaaagcat tcaaggttat gaatgaactg cggagtaaac agctgttggtg tgacgtgatg
780
attgtggcag aagatgtcga gatagaagcc caccgtgtgg tccctggcagc ctgcagcccc
840
tacttctgtg cgatgttcac aggtgacatg tctgagagta aagccaaaaa gatagaaatc
900
aaggacgtgg atgggcagac gctgagtaag ctgattgact acatctatac tgctgaaatc
960
gaggtgactg aagagaatgt ccagggtgctg ctcccggcag ccagcttgct gcagctcatg
1020
gatgttcggc agaactgctg tgacttctct cagtctcagt tgcacccac caattgcctg
1080
ggcatccgtg cgtttgcaga tgtacacacc tgcactgacc ttctgcagca ggccaatgcc
1140
tacgcagagc agcactttcc agaggatgag ctaggagaag aatttcttag cctgagctctg
1200
gaccaggtgt gcagcttgat atccagcgac aagctgaccg tttcttcaga agagaagggtg
1260
tttgaagctg tgatctcatg gatcaattat gagaaagaaa cccgtttaga gcacatggca
1320
aagctgatgg aacatgtccg acttctctct ttacctaggg actacctagt ccaaacgggt
1380
gaagaagaag ctttgataaa gaataacaac acctgtaaag acttctctcat tgaggccatg
1440
aaataccatc tctccctct ggatcagaga ctattgatta agaaccacag gaccaagccc
1500
aggactccag tcagccttcc caaggctcatg attgtggttg gcggccaggc acccaaggca
1560
atccgcagtg tggagtgcta tgatttcgag gaggaccggt gggatcagat tgctgagctt
1620
ccttccagaa gatgcagagc aggtgtggtg ttcattggctg gccacgtgta tgccgtggga
1680
gggtttaatg gctcactgcg ggtgcggaca gtggatgtgt atgacggcgt gaaggaccag
1740
tggacgtcca ttgccagcat gcaggagcgc cggagcacac tgggcgcagc ggtgctcaat
1800
gacttgctct acgcagtggg aggttttgat ggcagtactg gcctagcatc ggtggaagcc
1860
tacagctaca agaccaacga gtggttcttt gtggccccga tgaacacgcg gcggagcagt
1920

gtgggtgtgg gcgttgtgga ggggaagcta tatgctgttg ggggttatga tggagcttcc
1980
cgccagtgtc tgagcactgt ggagcagtac aaccagcga ccaatgaatg gatatacgtg
2040
gcggacatga gcacccgccg cagtggcgca ggggttggag tgcttagcgg acagctgtac
2100
gccacagggtg ggcacatgatg gcctttgggtg aggaagagcg ttgaggttta cgatcctgga
2160
acaaatacct ggaagcaagt ggcagacatg aacatgtgcc ggcgcaacgc aggggtctgt
2220
gcagtaaagt ggctcctgta tgtggttggg ggggatgatg gatcctgcaa cttggcttcg
2280
gtggagtact acaatcctgt cactgacaaa tggacgctgc ttccaacgaa catgagcacg
2340
gggaggagct atgcagggtg tgccgtgatt cacaagtcct tgtgaccaa actcctactg
2400
ccaggagggtg gaggaaggag cagggtgctgc ctgtgactct gaacagcagg accttgggtg
2460
ctggattcaa cttgcttggg agggctctgtg ctgctgtgag aaccgctctc ctctgacttg
2520
gcagactggt gttgttcatc gcagtgtgga caccattacc caccgccgtt cccctgagg
2580
gctctggcct atgcctgag caaggggggt cttgacatcc ccaggcagca ccttggggct
2640
ttgttttggg gtttctacag ggacaatata gaccctggag tgtgtgtgtg tgtgtgtgtg
2700
tgtagaccat ggtgtttctc tatgtttctc taagttgggg ggtgagcgtg tgtgacagtc
2760
tactggattt ctttactact gatcctttcg ctgtgttaaa aatcaagtca cagagacctc
2820
tcttctggat ttgtcccatg gggaccctga gactactaaa gctgctttct tctgaaggtc
2880
cagttggaca gtctgggaat gtccagaaat aaccagtga aggggcagtt ctctggccac
2940
accacttat gtactttaac tactgtgact ttgtctgcag aagagctgga aaattctcga
3000
agctgcaccg tgcctctgt gtgctagaat aagggacaaa tgggttcctt gtgcttctca
3060
gctcactgtt tttccttgag ttctcctaca ggaagcagat gagaactgcc cagtcttcag
3120
gtttaggcca ttggctcttg atgtcataga ttccaggcct gggagggtgt atgtctcttc
3180
agctgggaaa actagctctt cagagaagcc tcgggtaaca ctgaaaaaca aaacaaaaca
3240
aaacaaaaac aggaaaaaaa caaaaaacca aagtggtaag gattcagttc ctgcctataa
3300
tggtctcaga gagggctcta cttttagggt ttcccaggac aggacagtcc ccatttatac
3360
ttattatccc agtttaatta ttcacagcac cccattttac tcagaagtgt tctggctctg
3420
aggataaata agaggtcacc ctctccaga cccaaagata gatttgtgcc tgtgttggat
3480
ggggtcgtgt gtgattcaga tggacattgg atggcttcaa aggaatatac cactagagct
3540

ggcccttggc actttgtgac agtgggtcaag tctgtctaata gtccttgtct tctttttctt
3600
gtgctttccc cctattccag ggtgtgcacc ctctcccaa cccccaagaa cccactact
3660
gctttccctg tgaggtagga gatatcagtg ggtcttggat ttgaggcttc ctaagatgtg
3720
cttgcatttt aaaaagggag cttgggtgaga gctttgctaa ttcacaggta aaaattatta
3780
acaatagaac ttcaagcatc ttgaggagcg ggcatttgag ggggcatgga gtaatttgta
3840
tttaaaaaac cttaaagttg tgctgttctt aaactagcaa attgctcatg ctgaaatttc
3900
tggcataagc aggggaagtc ttgtgtctgg agaatagtct catacctgac agtctgggac
3960
accctcccta ctttgagaat ccacctacag gaagccaagg aactttataa atcctgatgt
4020
tggacttctg atacgactgg gctacttcca agcaggtgct gcaggagatt ggcattcccc
4080
agccctgca gttagaaacc ccgaagtctt ccagccagt gagccacttt gtgtatttac
4140
tgtatattta ttgtgcccta aatgtgcaac tctcctaaag aaaaaacttc tctttctgat
4200
gttaagcaca tggtacttca acaagatgct tggagaacaa caaggtaccc agaattttta
4260
gaagccttca gaagaggcta aaatatccag ctttggggga cctggaagaa atgtctccaa
4320
aggaagcaag gcatgtttta gttgagtgtc ctggtctcac tatgaagtgg ggatgactgt
4380
ggcttcataa ctctacctgg ctgtgggttg gaagctgatg gaatgagaaa tgcctttct
4440
ccttctctga ggaaattttg agacttgttt cgggtgtgtc gtgtgatggg gatgaggctg
4500
gggttgggat ctgatgtatg ccattcacag aagctctcaa tttcagatga taggtgaatt
4560
ccctgcccct cccccaccac tgagaagcta gactttcatg cgggagaggc tacttttatg
4620
tgtcgtcttc cggggaaggg tccctccact gaaagctagc cagtcatgtt ttctgttttt
4680
ggatttttgc aattggtttc acctcatgtc tccctcccta caaagcactg cctctactgg
4740
gcgtgctgcc aaggccatgt gcactccatc ctcatgtatc ctttttcacg gggaccagaa
4800
cactggtacg tcatcaccaa agccaatctg ctctagctgc ccacagatgc caccaaaacc
4860
tgctatctct tcatcaccag gtacgattct ctttccacag tggacacagc aggtattttt
4920
ctagtttgtg ctggtcacgt ggtagatgaa gcctcttact gcccactta ggggtggcac
4980
ggctgcttgt gaatgcagct ttgccagtgg catatctgtc atctgattgc ggtggtgaaa
5040
tggaattgag gcccaaggtt agaagcagcc gagacgccac ttggatactg atttgaacaa
5100
tgtagaagtc agattctgaa ttccaaagtt atttctcata agtaccat atgcatctctc
5160

catctacaaa gttgcagtat tatgcaaata aaactgacct cattttctgc tatgcaataa
5220
gaataacttaa ttctagttcc cgacaagcca gttgcaatat cccctaagat gctttttgag
5280
ctgtcttact ttgatatctg ttgtgtaacg tttgtatatatt tctgagccag atcctttcaa
5340
agattgcctt tttataaaaat tgaagctata gcttttaggc taaaatttta acgtagatat
5400
ttttataaga tatttttttcc aagagtttga atcgctttttt attgtccatg gtaatgaaat
5460
gttgtgttct ttgcatcatt cactctcaaa cgtagttcat gcctgtagct ctcttccttt
5520
tgtttctcac ccttcagaaa catatttttc agtagctcca ggtagatgag cctttttttt
5580
ttttttttta aataccatat tcaagggagt ctgctgaatt ttaaaacgca gtcactgggtg
5640
tttcttgaat tgctagggac tgatgttatg ttcgactcag cacttgcccg tctgtattga
5700
ttgtgtcttt tttttttttt ttttgagtc tgctttctgt ggggggtgagg ccgggctgtc
5760
tcgtgggtggc tcccactgac gggcactgag cctggtaccc tgtggcatgg agaagcctca
5820
gggaaaggcc tgcccccca gcacatactc ccatagtgtc ctaggtccag ccgaccattc
5880
cttattctct tctatctcct tgttgatctg aagcttccaa tagcttgagg cctttgctgc
5940
tggatgatgc cctttttggg agcatcttgt ctctaacctt taaaagaggg gtcaatcctc
6000
atgatccctg tgtgttaagc atatgctttg cagggtgctca cactacactt acaacttgct
6060
tcttgagcta tgtctctact ccaggctctg ttttgtgtat ttatctgcca tttgcatcat
6120
ggtttttaaa atttattatt attattatta ttgttgggac aggtgccatt taaattgcct
6180
ccatgctccc catttgcacc tagctggatc aagttgggag gctgagcaaa ctcatattcc
6240
agttagttgg agtttttaaa ggctctgttt gcctggagaa gcaaggaggt tagaatgtaa
6300
tttttttaag cgtttgcact atttagagtc ctaagcccct catgttcagc tgtgctgtgt
6360
ttctactgac caagcaggag agccagcagc acttccagca tttgggaatg gaagagattt
6420
cttctgtagt ggataattgc agcctcatag cccctgtgca gccttcgtca tgggactcag
6480
tgactcatgg atatagcatc agccatggca ggaatgcaca ggactgtggc atttgcagca
6540
tcaaatacacc ctagtgccat gtttggttat gagattgtaa attattcgct cccccgtcct
6600
ccccccctt cattttcagt ggcaatagag gacccttggt gtacttcttg ttaatttgc
6660
atattatgtg taaaatgctt tcgttgaaag aaaactgaag aactgaatg tgtatgtctg
6720
tgtgggtgct ctgtccctgt gggtgtcata gccagtcaga cttgatcact gacaccccg
6780

acaacatatt gcataggtaa gatcctcgat ctggtgttct ctgcgtggct gttagggact
 6840
 gtatatcttg taaaagaaca ctgtcacat gcttgatcag ttacagcaat agctgaagaa
 6900
 acatttcctc aaatgtatta ttttaacagg aatcatgttc taatttccca tcctttaatt
 6960
 ttaataaaaag ctgaactgtg tgaaaaaa
 6988

<210> 5708

<211> 506

<212> PRT

<213> Homo sapiens

<400> 5708

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Met | Ser | Glu | Ser | Lys | Ala | Lys | Lys | Ile | Glu | Ile | Lys | Asp | Val | Asp |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Gln | Thr | Leu | Ser | Lys | Leu | Ile | Asp | Tyr | Ile | Tyr | Thr | Ala | Glu | Ile |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Val | Thr | Glu | Glu | Asn | Val | Gln | Val | Leu | Leu | Pro | Ala | Ala | Ser | Leu |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Leu | Gln | Leu | Met | Asp | Val | Arg | Gln | Asn | Cys | Cys | Asp | Phe | Leu | Gln | Ser |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Gln | Leu | His | Pro | Thr | Asn | Cys | Leu | Gly | Ile | Arg | Ala | Phe | Ala | Asp | Val |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| His | Thr | Cys | Thr | Asp | Leu | Leu | Gln | Gln | Ala | Asn | Ala | Tyr | Ala | Glu | Gln |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| His | Phe | Pro | Glu | Val | Met | Leu | Gly | Glu | Glu | Phe | Leu | Ser | Leu | Ser | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Asp | Gln | Val | Cys | Ser | Leu | Ile | Ser | Ser | Asp | Lys | Leu | Thr | Val | Ser | Ser |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Glu | Glu | Lys | Val | Phe | Glu | Ala | Val | Ile | Ser | Trp | Ile | Asn | Tyr | Glu | Lys |
| | | | 130 | | | 135 | | | | | 140 | | | | |
| Glu | Thr | Arg | Leu | Glu | His | Met | Ala | Lys | Leu | Met | Glu | His | Val | Arg | Leu |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Pro | Leu | Leu | Pro | Arg | Asp | Tyr | Leu | Val | Gln | Thr | Val | Glu | Glu | Glu | Ala |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Leu | Ile | Lys | Asn | Asn | Asn | Thr | Cys | Lys | Asp | Phe | Leu | Ile | Glu | Ala | Met |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Lys | Tyr | His | Leu | Leu | Pro | Leu | Asp | Gln | Arg | Leu | Leu | Ile | Lys | Asn | Pro |
| | | | 195 | | | | 200 | | | | | 205 | | | |
| Arg | Thr | Lys | Pro | Arg | Thr | Pro | Val | Ser | Leu | Pro | Lys | Val | Met | Ile | Val |
| | 210 | | | | 215 | | | | | | 220 | | | | |
| Val | Gly | Gly | Gln | Ala | Pro | Lys | Ala | Ile | Arg | Ser | Val | Glu | Cys | Tyr | Asp |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | |
| Phe | Glu | Glu | Asp | Arg | Trp | Asp | Gln | Ile | Ala | Glu | Leu | Pro | Ser | Arg | Arg |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Cys | Arg | Ala | Gly | Val | Val | Phe | Met | Ala | Gly | His | Val | Tyr | Ala | Val | Gly |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Gly | Phe | Asn | Gly | Ser | Leu | Arg | Val | Arg | Thr | Val | Asp | Val | Tyr | Asp | Gly |
| | | | 275 | | | | 280 | | | | | 285 | | | |
| Val | Lys | Asp | Gln | Trp | Thr | Ser | Ile | Ala | Ser | Met | Gln | Glu | Arg | Arg | Ser |
| | | | 290 | | | 295 | | | | | 300 | | | | |
| Thr | Leu | Gly | Ala | Ala | Val | Leu | Asn | Asp | Leu | Leu | Tyr | Ala | Val | Gly | Gly |

```

305          310          315          320
Phe Asp Gly Ser Thr Gly Leu Ala Ser Val Glu Ala Tyr Ser Tyr Lys
          325          330          335
Thr Asn Glu Trp Phe Phe Val Ala Pro Met Asn Thr Arg Arg Ser Ser
          340          345          350
Val Gly Val Gly Val Val Glu Gly Lys Leu Tyr Ala Val Gly Gly Tyr
          355          360          365
Asp Gly Ala Ser Arg Gln Cys Leu Ser Thr Val Glu Gln Tyr Asn Pro
          370          375          380
Ala Thr Asn Glu Trp Ile Tyr Val Ala Asp Met Ser Thr Arg Arg Ser
385          390          395          400
Gly Ala Gly Val Gly Val Leu Ser Gly Gln Leu Tyr Ala Thr Gly Gly
          405          410          415
His Asp Gly Pro Leu Val Arg Lys Ser Val Glu Val Tyr Asp Pro Gly
          420          425          430
Thr Asn Thr Trp Lys Gln Val Ala Asp Met Asn Met Cys Arg Arg Asn
          435          440          445
Ala Gly Val Cys Ala Val Asn Gly Leu Leu Tyr Val Val Gly Gly Asp
          450          455          460
Asp Gly Ser Cys Asn Leu Ala Ser Val Glu Tyr Tyr Asn Pro Val Thr
465          470          475          480
Asp Lys Trp Thr Leu Leu Pro Thr Asn Met Ser Thr Gly Arg Ser Tyr
          485          490          495
Ala Gly Val Ala Val Ile His Lys Ser Leu
          500          505

```

<210> 5709

<211> 1805

<212> DNA

<213> Homo sapiens

<400> 5709

```

aatctcaccc ccctggtgga catggaggag ctggagatgt cagggaaacca cttccctgag
60
atcaggcctg gctccttcca tggcctgagc tccctcaaga agctctgggt catgaactca
120
caggtcagcc tgattgagcg gaatgctttt gacgggctgg cttcacttgt ggaactcaac
180
ttggcccaca ataacctctc ttctttgccc catgacctct ttaccccgct gaggtacctg
240
gtggagttgc atctacacca caacccttgg aactgtgatt gtgacattct gtggctagcc
300
tggtggcttc gagagtatat acccaccaat tccacctgct gtggccgctg tcatgctccc
360
atgcacatgc gaggccgcta cctcgtggag gtggaccagg cctccttcca gtgctctgcc
420
cccttcatca tggacgcacc tcgagacctc aacatttctg agggtcggat ggcagaactt
480
aagtgtcgga ctccccctat gtcctccgtg aagtggttgc tgcccaatgg gacagtgtctc
540
agccacgcct cccgccaccc aaggatctct gtcctcaacg acggcacctt gaacttttcc
600
cacgtgctgc tttcagacac tgggggtgtac acatgcatgg tgaccaatgt tgcaggcaac
660

```

tccaacgcct cggcctacct caatgtgagc acggctgagc ttaacacctc caactacagc
 720
 ttctttacca cagtaacagt ggagaccacg gagatctcgc ctgaggacac aacgcgaaag
 780
 tacaagcctg ttcctaccac gtccactggc taccagccgg catataccac ctctaccacg
 840
 gtgctcattc agactacccg tgtgccaag cagggtggcag taccgcgcag agacaccact
 900
 gacaagatgc agaccagcct ggatgaagtc atgaagacca ccaagatcat cattggctgc
 960
 tttgtggcag tgactctgct agctgccgcc atgttgattg tcttctataa acttcgtaag
 1020
 cggcaccacg agcggagtac agtcacagcc gcccgactg ttgagataat ccagggtggc
 1080
 gaagacatcc cagcagcaac atccgcagca gcaacagcag ctccgtccgg tgtatcaggt
 1140
 gagggggcag tagtgctgcc cacaattcat gaccatatta actacaacac ctacaaacca
 1200
 gcacatgggg cccactggac agaaaacagc ctgggggaact ctctgcaccc cacagtcacc
 1260
 actatctctg aaccttatat aattcagacc cataccaagg acaaggtaca ggaaactcaa
 1320
 atatgactcc cctcccccaa aaaaacttat aaaatgcaat agaatgcaca caaagacagc
 1380
 aacttttgta cagagtgggg agagactttt tcttgatat gcttatatat taagtctatg
 1440
 ggctgggtaa aaaaaacaga ttatattaaa atttaaagac aaaaagtcaa aacaaaaata
 1500
 ttttctaact tgtaagttct atttaaaggg ggtggggggg aatcttgga acgttggtgg
 1560
 gtacaagcca caagttaact tgctatgctg ccagaaggga tttctggtat aagggtgaaa
 1620
 ttgctgagat aaaataaact aaaacaacaa acatccttaa agaggtaggg tgtgggctgc
 1680
 tgagggggca agagggatag actgaatctg tcatttttta gaagatgctt cataggacac
 1740
 aggactatcc atttctacag acatctttct taagccgaga gctgtctttg cagaattatc
 1800
 ttatt
 1805

<210> 5710

<211> 441

<212> PRT

<213> Homo sapiens

<400> 5710

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Thr | Pro | Leu | Val | Asp | Met | Glu | Glu | Leu | Glu | Met | Ser | Gly | Asn |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| His | Phe | Pro | Glu | Ile | Arg | Pro | Gly | Ser | Phe | His | Gly | Leu | Ser | Ser | Leu |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| Lys | Lys | Leu | Trp | Val | Met | Asn | Ser | Gln | Val | Ser | Leu | Ile | Glu | Arg | Asn |
| | | 35 | | | | | 40 | | | | 45 | | | | |
| Ala | Phe | Asp | Gly | Leu | Ala | Ser | Leu | Val | Glu | Leu | Asn | Leu | Ala | His | Asn |

| | | |
|---|-----|-----|
| 50 | 55 | 60 |
| Asn Leu Ser Ser Leu Pro His Asp Leu Phe Thr Pro Leu Arg Tyr Leu | | |
| 65 | 70 | 75 |
| Val Glu Leu His Leu His His Asn Pro Trp Asn Cys Asp Cys Asp Ile | | 80 |
| | 85 | 90 |
| Leu Trp Leu Ala Trp Trp Leu Arg Glu Tyr Ile Pro Thr Asn Ser Thr | | 95 |
| | 100 | 105 |
| Cys Cys Gly Arg Cys His Ala Pro Met His Met Arg Gly Arg Tyr Leu | | 110 |
| | 115 | 120 |
| Val Glu Val Asp Gln Ala Ser Phe Gln Cys Ser Ala Pro Phe Ile Met | | 125 |
| | 130 | 135 |
| Asp Ala Pro Arg Asp Leu Asn Ile Ser Glu Gly Arg Met Ala Glu Leu | | 140 |
| 145 | 150 | 155 |
| Lys Cys Arg Thr Pro Pro Met Ser Ser Val Lys Trp Leu Leu Pro Asn | | 160 |
| | 165 | 170 |
| Gly Thr Val Leu Ser His Ala Ser Arg His Pro Arg Ile Ser Val Leu | | 175 |
| | 180 | 185 |
| Asn Asp Gly Thr Leu Asn Phe Ser His Val Leu Leu Ser Asp Thr Gly | | 190 |
| | 195 | 200 |
| Val Tyr Thr Cys Met Val Thr Asn Val Ala Gly Asn Ser Asn Ala Ser | | 205 |
| | 210 | 215 |
| Ala Tyr Leu Asn Val Ser Thr Ala Glu Leu Asn Thr Ser Asn Tyr Ser | | 220 |
| 225 | 230 | 235 |
| Phe Phe Thr Thr Val Thr Val Glu Thr Thr Glu Ile Ser Pro Glu Asp | | 240 |
| | 245 | 250 |
| Thr Thr Arg Lys Tyr Lys Pro Val Pro Thr Thr Ser Thr Gly Tyr Gln | | 255 |
| | 260 | 265 |
| Pro Ala Tyr Thr Thr Ser Thr Thr Val Leu Ile Gln Thr Thr Arg Val | | 270 |
| | 275 | 280 |
| Pro Lys Gln Val Ala Val Pro Ala Thr Asp Thr Thr Asp Lys Met Gln | | 285 |
| | 290 | 295 |
| Thr Ser Leu Asp Glu Val Met Lys Thr Thr Lys Ile Ile Ile Gly Cys | | 300 |
| 305 | 310 | 315 |
| Phe Val Ala Val Thr Leu Leu Ala Ala Ala Met Leu Ile Val Phe Tyr | | 320 |
| | 325 | 330 |
| Lys Leu Arg Lys Arg His Gln Gln Arg Ser Thr Val Thr Ala Ala Arg | | 335 |
| | 340 | 345 |
| Thr Val Glu Ile Ile Gln Val Asp Glu Asp Ile Pro Ala Ala Thr Ser | | 350 |
| | 355 | 360 |
| Ala Ala Ala Thr Ala Ala Pro Ser Gly Val Ser Gly Glu Gly Ala Val | | 365 |
| | 370 | 375 |
| Val Leu Pro Thr Ile His Asp His Ile Asn Tyr Asn Thr Tyr Lys Pro | | 380 |
| 385 | 390 | 395 |
| Ala His Gly Ala His Trp Thr Glu Asn Ser Leu Gly Asn Ser Leu His | | 400 |
| | 405 | 410 |
| Pro Thr Val Thr Thr Ile Ser Glu Pro Tyr Ile Ile Gln Thr His Thr | | 415 |
| | 420 | 425 |
| Lys Asp Lys Val Gln Glu Thr Gln Ile | | 430 |
| | 435 | 440 |

<210> 5711

<211> 1142

<212> DNA

<213> Homo sapiens

<400> 5711

tgggtgggtggg ggagtatgaa tgtgggctttc agagttggat gttataaaac atagtcattt
 60
 ggaagttggg aactttttat ttttgttatc ttgtttttaa tacaggatgt ttgccacacg
 120
 agtcactcga gagaatctct gagtcctggc gagggctttc tgaggcttcg tgtattagca
 180
 gctgttgtct tccaactcag cggcagggtt gcctttcccc acggacactc tggaccttgt
 240
 agtcctcaa gcttccctgt ctattgagca gataggaagc cgtgtcaa atgtggcacc
 300
 ttgaggaaat gcctagtga tgacagacaa cttgcctttg atgattttca agagagttgt
 360
 gctatgatgt ggcaaaagta tgcaggaagc aggcgggtcaa tgcctctggg agcaaggatc
 420
 cttttccacg gtgtgttcta tgccgggggc tttgccattg tgtattacct cattcaaaag
 480
 tttcattcca gggctttata ttacaagttg gcagtggagc agctgcagag ccatcccgag
 540
 gcacaggaag ctctgggccc tctctcaac atccattatc tcaagctcat cgacagggaa
 600
 aacttcgtgg acattgttga tgccaagttg aagattcctg tctctggatc caaatcagag
 660
 ggcttctct acgtccactc atccagaggt ggcccccttc agaggtggca ccttgacgag
 720
 gtcttttttag agctcaagga tggtcagcag attcctgtgt tcaagctcag tggggaaaac
 780
 ggtgatgaag tgaaaaagga gtagagacga ccagaagac ccagcttgct tctagtccat
 840
 ctttccctca tctctaccat atggccactg ggggtgggtggc ccattctcagt gacagacact
 900
 cctgcaaccc agttttccag ccaccagtgg gatgatggta tgtgccagca catggtaatt
 960
 ttgggtgtaat tctaacttgg gcacaacaaa tgctatttgt cattttttaa ctgaatccga
 1020
 aagaaactcc tattataaat ttaagataat gtaatgtatt tgaaagtgt ttgtataaaa
 1080
 aagcacatga taaaaggaat cagaattaat aaaatgtttg ttgatcttta aaaaaaaaaa
 1140
 1142

<210> 5712

<211> 145

<212> PRT

<213> Homo sapiens

<400> 5712

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Trp | Gln | Lys | Tyr | Ala | Gly | Ser | Arg | Arg | Ser | Met | Pro | Leu | Gly | Ala |
| 1 | | | 5 | | | | | 10 | | | | | 15 | | |
| Arg | Ile | Leu | Phe | His | Gly | Val | Phe | Tyr | Ala | Gly | Gly | Phe | Ala | Ile | Val |
| | | 20 | | | | | | 25 | | | | 30 | | | |
| Tyr | Tyr | Leu | Ile | Gln | Lys | Phe | His | Ser | Arg | Ala | Leu | Tyr | Tyr | Lys | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |

Ala Val Glu Gln Leu Gln Ser His Pro Glu Ala Gln Glu Ala Leu Gly
 50 55 60
 Pro Pro Leu Asn Ile His Tyr Leu Lys Leu Ile Asp Arg Glu Asn Phe
 65 70 75 80
 Val Asp Ile Val Asp Ala Lys Leu Lys Ile Pro Val Ser Gly Ser Lys
 85 90 95
 Ser Glu Gly Leu Leu Tyr Val His Ser Ser Arg Gly Gly Pro Phe Gln
 100 105 110
 Arg Trp His Leu Asp Glu Val Phe Leu Glu Leu Lys Asp Gly Gln Gln
 115 120 125
 Ile Pro Val Phe Lys Leu Ser Gly Glu Asn Gly Asp Glu Val Lys Lys
 130 135 140
 Glu
 145

<210> 5713

<211> 1996

<212> DNA

<213> Homo sapiens

<400> 5713

ncgagcgggt gctgctagcg gaggcgccat attggagggg acaaaactcc ggcgacagcg
 60
 agtgacacaa ataaaccctt ggacccctt gttccctcag ctctaaggcg cgcatgttg
 120
 tacctagaag actatctgga aatgattgag cagcttccta tggatctgcg ggaccgcttc
 180
 acggaaatgc gcgagatgga cctgcagggtg cagaatgcaa tggatcaact agaacaaaga
 240
 gtcagtgaat tctttatgaa tgcaaagaaa aataaacctg agtggaggga agagcaaagt
 300
 gcatccatca aaaaagacta ctataaagct ttggaagatg cagatgagaa ggttcagttg
 360
 gcaaaccaga tatatgactt ggtagatcga cacttgagaa agctggatca ggaactggct
 420
 aagtttataaa tggagctgga agctgataat gctggaatta cagaaatatt agagaggcga
 480
 tctttggaat tagacactcc ttcacagcca gtgaacaatc accatgctca ttcacatact
 540
 ccagtggaaa aaaggaaata taatccaact tctcaccata cgacaacaga tcatattcct
 600
 gaaaagaaat ttaaactctga agctcttcta tccaccctta cgtcagatgc ctctaaggaa
 660
 aatacactag gttgtcgaat taataattcc acagcctctt ctaacaatgc ctacaatgtg
 720
 aattcctccc aacctctggg atcctataac attggctcgt tatcttcagg aactggtgca
 780
 ggggcaatta ccatggcagc tgctcaagca gttcaggcta cagctcagat gaaggaggga
 840
 cgaagaacat caagtttata agccagttat gaagcattta agaataatga ctttcagttg
 900
 ggaaaagaat tttcaatggc cagggaacaa gttggctatt catcatcttc ggcacttatg
 960

acaacattaa cacagaatgc cagttcatca gcagccgact cacggagtgg tcgaaagagc
 1020
 aaaaacaaca acaagtcttc aagccagcag tcatcatctt cctcctcctc ttcttcctta
 1080
 tcatcgtggt cttcatcatc aactgttgta caagaaatct ctcaacaaac aactgtagtg
 1140
 ccagaatctg attcaaatag tcagggtgat tggacttacg acccaaatac acctcgatac
 1200
 tgcatttgta atcaggatc ttatgggtgag atgggtgggat gtgataacca agattgccct
 1260
 atagaatggt tccattatgg ctgcgttgga ttgacagagg caccaaaaagg caaatgggtac
 1320
 tgtccacagt gcactgctgc aatgaagaga agaggcagca gacacaaata aagggtggtcc
 1380
 ttttgtttga tgaagaaata aacttcagct gaagatttta tataggactt taaaaagaag
 1440
 agaagagaaa gaagaaacaa tgcatttcca ggcaaccact taaaggattt acatagacaa
 1500
 tcctataaga tcttgaactt gaattttatg ggttgatatt taataatgta agtaaattat
 1560
 ttatgcactc ctggtgtgct atgaatatta ttccagttag ccttggatta tttcagtggc
 1620
 caacatatgc agacatttgc actcctcaac cattttctca aagtaatggg cattctatga
 1680
 tttagacttc aaggaattcc aatgatgaag attttaagga aagtatttta tattcaacag
 1740
 gtatattctg ctgcatgtac tgtactccag agctgttatg taacactgta tataaatggt
 1800
 tgcaaaaaaa aaaaagtcag tgcttctaaa aagaatttaa gataatgggt tttaaatgc
 1860
 ctttataata agctttgttt ctttgtgaaa ctaattcagc aggctgaagg aaatggttca
 1920
 tgtgataatg tgggctggta tcctctagag tacctgggta cataaacgga aactcctgtt
 1980
 ggtaaaagt attttg
 1996

<210> 5714

<211> 408

<212> PRT

<213> Homo sapiens

<400> 5714

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Glu | Gln | Leu | Pro | Met | Asp | Leu | Arg | Asp | Arg | Phe | Thr | Glu | Met | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Met | Asp | Leu | Gln | Val | Gln | Asn | Ala | Met | Asp | Gln | Leu | Glu | Gln | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Val | Ser | Glu | Phe | Phe | Met | Asn | Ala | Lys | Lys | Asn | Lys | Pro | Glu | Trp | Arg |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Glu | Glu | Gln | Met | Ala | Ser | Ile | Lys | Lys | Asp | Tyr | Tyr | Lys | Ala | Leu | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Asp | Ala | Asp | Glu | Lys | Val | Gln | Leu | Ala | Asn | Gln | Ile | Tyr | Asp | Leu | Val |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Asp | Arg | His | Leu | Arg | Lys | Leu | Asp | Gln | Glu | Leu | Ala | Lys | Phe | Lys | Met |


```
<400> 5715
nggaaaggag ggtcaggcga gtccacgtga gggaaagcccc cgctgtgcgc ggagcctctg
60
ctgggcggag ggggagtgcc agccccagg agctaataccc cggctgatgg cgcagggccg
120
ggggcttggc cgtctagtgt gatgaaggag gcgacccccca aggtgggaag gcgcacgggt
180
```

tgggggtttga ggggtggatga ttggtgacgg aggggtgtatc ttcaggagga ggttcgagtg
 240
 aagatcaaag acttgaatga acacattgtt tgctgcctat gcgccggcta cttcgtggat
 300
 gccaccacca tcacagagtg tcttcatact ttctgcaaga gttgtattgt gaagtacctc
 360
 caaactagca agtactgccc catgtgcaac attaagatcc acgagacaca gccactgctc
 420
 aacctcaaac tggaccgggt catgcaggac atcgtgtata agctggtgcc tggcttgcaa
 480
 gacagtgaag agaaaacggat tcgggaattc taccagtccc gaggttttga ccgggtcacc
 540
 cagcccactg gggaaagagcc agcactgagc aacctcggcc tccccttcag cagctttgac
 600
 cactctaaag cccactacta tcgctatgat gagcagttga acctgtgcct ggagcggctg
 660
 aggtgaggag aaggtcaggg gttgcaggag gtgacagtgc caatgaccca gagccagggg
 720
 gggctctagg gagaggctga gcagtgagtg agtgcctatc cccttgaaga gagtatatca
 780
 tggctctggg tggggaagag gaggaagat aggattccct aacctgtgtc tatttcccc
 840
 cagttctggc aaagacaaga ataaaagcgt cctgcagggtg agaagggctg aggggagggc
 900
 ctctctaagg agactcacct cccatggtec tcccctcaca caccttgccc tcttccctcc
 960
 cctccctgct ccagaaacaa gtatgtccga tgttctgtta gagctgaggt acgccatctc
 1020
 cggagggtec tgtgtcaccg cttgatgcta aaccctcagc atgtgcagct cctttttgac
 1080
 aatgaagttc tccctgatca catgacaatg aagcagatat gcctctcccg ctggttcggc
 1140
 aagtaagcc aggccaccct ccctgggatc acacccctt cagactcccc ccaaccatcc
 1200
 tacagtctc aggggaaggg tgggctgagg ggccctttga ataataaag aacattcccc
 1260
 acgtactcca acttctcat tctctctta gccatcccct ttgcttttac aataaagtgt
 1320
 gaaagagaag aggaggtagg ggccaagccc ccaccccatc ccactcccct tccctcccca
 1380
 gatatttatg tgaaatgaac tgcagcttta ttttttgaaa taaaaacttt taaaaagcaa
 1440
 aaaaaaaaaa aaaaaaaaaa
 1458

<210> 5716

<211> 148

<212> PRT

<213> Homo sapiens

<400> 5716

Leu Gln Glu Glu Val Arg Val Lys Ile Lys Asp Leu Asn Glu His Ile
 1 5 10 15
 Val Cys Cys Leu Cys Ala Gly Tyr Phe Val Asp Ala Thr Thr Ile Thr

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 20 | | 25 | | 30 | | | | | | | | | | |
| Glu | Cys | Leu | His | Thr | Phe | Cys | Lys | Ser | Cys | Ile | Val | Lys | Tyr | Leu | Gln |
| | 35 | | | | | | 40 | | | | | 45 | | | |
| Thr | Ser | Lys | Tyr | Cys | Pro | Met | Cys | Asn | Ile | Lys | Ile | His | Glu | Thr | Gln |
| | 50 | | | | | | 55 | | | | | 60 | | | |
| Pro | Leu | Leu | Asn | Leu | Lys | Leu | Asp | Arg | Val | Met | Gln | Asp | Ile | Val | Tyr |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Lys | Leu | Val | Pro | Gly | Leu | Gln | Asp | Ser | Glu | Glu | Lys | Arg | Ile | Arg | Glu |
| | | | | 85 | | | | | 90 | | | | 95 | | |
| Phe | Tyr | Gln | Ser | Arg | Gly | Leu | Asp | Arg | Val | Thr | Gln | Pro | Thr | Gly | Glu |
| | | | 100 | | | | | 105 | | | | 110 | | | |
| Glu | Pro | Ala | Leu | Ser | Asn | Leu | Gly | Leu | Pro | Phe | Ser | Ser | Phe | Asp | His |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Ser | Lys | Ala | His | Tyr | Tyr | Arg | Tyr | Asp | Glu | Gln | Leu | Asn | Leu | Cys | Leu |
| | 130 | | | | | | 135 | | | | | 140 | | | |
| Glu | Arg | Leu | Arg | | | | | | | | | | | | |
| 145 | | | | | | | | | | | | | | | |

<210> 5717

<211> 1419

<212> DNA

<213> Homo sapiens

<400> 5717

```

gggcccctcc ttggctgtat ccgtcagtgg ctccagggtta agtctgcccc cccaccctc
60
gtggggcgagg gagcccgagg cagcccagag gctgggggaa gggggtggac ttttggcccc
120
tttcggttat tccctccatc tcgtcaacag ctgccgcgcg caggcttagc tcattcctct
180
gacctgccag gaagcagaga gacccacaga gcaggaggga ggcagaaagt ggagacggac
240
ctgagcccga ggaagaggca ggcagaggct gaggctgatt ccaccccagc ctgcctggac
300
aaccctcctt agccgcagcc ccttccagtt ccctaggggt tctgcccctc cccctctctg
360
gggcaccagc ccccagggt cctgcatccc accatgtcga tggctgtgga aacctttggc
420
ttcttcatgg caactgtggg gctgctgatg ctgggggtga ctctgccaaa cagctactgg
480
cgagtgtcca ctgtgcacgg gaacgtcatc accaccaaca ccatcttcga gaacctctgg
540
tttagctgtg ccaccgactc cctgggcgtc tacaactgct gggagttccc gtccatgctg
600
gccctctctg ggtatattca ggctgcccgc gactcatga tcaccgccat cctcctgggc
660
ttcctcgccc tcttgctagg catagcgggc ctgcgctgca ccaacattgg gggcctggag
720
ctctccagga aagccaagct ggcggccacc gcagggggccc tccacattct ggccggtatc
780
tgccgggatg tggccatctc ctggtacgcc ttcaacatca cccgggactt cttcgacccc
840
ttgtaccccg gaaccaagta cgagctgggc ccgcctctct acctgggggtg gagcgcctca
900

```

ctgatctcca tcttgggtgg cctctgcctc tgcctcgctt gctgctgcgg ctctgaacag
 960
 gaccagccg ccagcgcccg gcggccctac caggctcccg tgctcgtgat gcccgtcgcc
 1020
 acctcggacc aagaaggcga cagcagcttt ggcaaatacg gcagaaacgc ctacgtgtag
 1080
 cagctctggc cegtggggcc cgctgtcttc ccaactgccc aaggagaggg gacctggccg
 1140
 gggcccatte ccctatagta acctcagggg ccggccacgc cccgctcccg tagccccgcc
 1200
 ccggccaacgg ccccggtgtct tgcactctca tggccctccc aggccaagaa ctgctcttgg
 1260
 gaagtgcgat atctccctc tgaggetgga tccctcatct tctgacctg ggttctgggc
 1320
 tgtgaagggg acggtgtccc cgcacgtttg tattgtgtat aaatacatte attaataaat
 1380
 gcatattgtg accgttaaaa aaaaaaaaaa aaaaaaaaaa
 1419

<210> 5718

<211> 228

<212> PRT

<213> Homo sapiens

<400> 5718

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Met | Ala | Val | Glu | Thr | Phe | Gly | Phe | Phe | Met | Ala | Thr | Val | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Leu | Met | Leu | Gly | Val | Thr | Leu | Pro | Asn | Ser | Tyr | Trp | Arg | Val | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Val | His | Gly | Asn | Val | Ile | Thr | Thr | Asn | Thr | Ile | Phe | Glu | Asn | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Trp | Phe | Ser | Cys | Ala | Thr | Asp | Ser | Leu | Gly | Val | Tyr | Asn | Cys | Trp | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Phe | Pro | Ser | Met | Leu | Ala | Leu | Ser | Gly | Tyr | Ile | Gln | Ala | Cys | Arg | Ala |
| 65 | | | | 70 | | | | | | 75 | | | | 80 | |
| Leu | Met | Ile | Thr | Ala | Ile | Leu | Leu | Gly | Phe | Leu | Gly | Leu | Leu | Leu | Gly |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Ile | Ala | Gly | Leu | Arg | Cys | Thr | Asn | Ile | Gly | Gly | Leu | Glu | Leu | Ser | Arg |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Lys | Ala | Lys | Leu | Ala | Ala | Thr | Ala | Gly | Ala | Leu | His | Ile | Leu | Ala | Gly |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Ile | Cys | Gly | Met | Val | Ala | Ile | Ser | Trp | Tyr | Ala | Phe | Asn | Ile | Thr | Arg |
| | 130 | | | | | | 135 | | | | 140 | | | | |
| Asp | Phe | Phe | Asp | Pro | Leu | Tyr | Pro | Gly | Thr | Lys | Tyr | Glu | Leu | Gly | Pro |
| 145 | | | | 150 | | | | | | 155 | | | | 160 | |
| Ala | Leu | Tyr | Leu | Gly | Trp | Ser | Ala | Ser | Leu | Ile | Ser | Ile | Leu | Gly | Gly |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Leu | Cys | Leu | Cys | Ser | Ala | Cys | Cys | Cys | Gly | Ser | Asp | Glu | Asp | Pro | Ala |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Ala | Ser | Ala | Arg | Arg | Pro | Tyr | Gln | Ala | Pro | Val | Ser | Val | Met | Pro | Val |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| Ala | Thr | Ser | Asp | Gln | Glu | Gly | Asp | Ser | Ser | Phe | Gly | Lys | Tyr | Gly | Arg |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Asn | Ala | Tyr | Val | | | | | | | | | | | | |

225

<210> 5719

<211> 2267

<212> DNA

<213> Homo sapiens

<400> 5719

ntgtcagcag agccctgtac cgtgcgcctc agcaaactcc tccatctatt gctccaaggc
60
ccgcctttga tgtaggtcc tggagaaggg gaagtgggtc gggaccacac ggtccagctg
120
ctccgtgcc aagcagtcgg aaagggaaac aggcactaat caaaggcaac tgctcactcg
180
tacctctttc ttctgaagca catgatgaag tctattctca gcagcgattt tctttacaaa
240
ctctttcggt aatcccccca gagggagat ggttctctc agggcatcct gggaaacctg
300
gcatttctaa cttcaaaccg atttctgaaa agcccttcgg gcttcttaac gtgcttctgc
360
tcaaagactt cttcatcttc cagggaggtt cttgcatagt gacctgtggc aatggcatct
420
gcccctgaac acatcattcc aatactcctt tacgtaggac acttgatgga aagggatgtc
480
taagatctgg caaactctgt aagcatcttc acagtctttg tcggcagtag agaccccatg
540
ttcatccagt gaggccaggt tcttcataaa caccctgtc acctggtaac ctctccgcct
600
cagcagcagc ggggccacgg cgctgtccac gccgccggac agggcgacac cgacgtgccg
660
caaggcctgc atccgccagt cggcccgctc gggcgcggtg acagcgccgt ggccgcgctg
720
ctgctgaggg ggagaggtta ccaggtgaca ggggtgttta tgaagaactg ggactcactg
780
gatgaacatg ggggtctgtac tgccgacaaa gactgtgaag atgcttacag agtttgccag
840
atcttagaca tccctttcca tcaagtgtcc tacgtaaagg agtattggaa tgatgtgttc
900
agtgaacttt tgaatgagta tgaaaaagga aggactccca atcctgacat agtttgcaac
960
aagcacatca aatttagttg cttttttcat tatgctgtgg ataactctgg ggcagatgcc
1020
attgccacag gtcactatgc aagaacttcc ctggaagatg aagaagtctt tgagcagaag
1080
cacgttaaga agcccgaagg gcttttcaga aatcggtttg aagttagaaa tgcggtaaaa
1140
ctcctccagg cagctgacag ctttaaagac cagaccttct ttctcagcca ggtttcccag
1200
gatgccctga ggagaacat cttccctctg gggggattaa cgaaagagtt tgtaaagaaa
1260
atcgtgctg agaatagact tcatcatgtg cttcagaaga aagagagcat gggcatgtgt
1320
ttcatcgga agaggaattt tgaacatttc cttcttcagt atctgcagcc tcgacctggt
1380

cactttatattt ccatagaaga caataagggtt ctgggaacac ataaagggttg gttcctgtat
 1440
 accttggggcc agagagcaaa catagggtggc ctgagagagc cctggtacgt ggtggagaag
 1500
 gacagcgtca aggggtgacgt gtttgtggcc ccccgacag accaccagc cctgtacagg
 1560
 gacctgctga ggaccagccg cgtgcactgg attgcggagg agcctcccgc agcactggtc
 1620
 cgggacaaga tgatggagtg ccacttccga ttccgccacc agatggcact agtgccctgt
 1680
 gtgctgaccc tcaatcaaga tggcaccgtg tgggtgacag ctgtgcaggc tgtgcgtgcc
 1740
 cttgccacag gacagtttgc tgtgttctac aagggggacg agtgccctggg cagcgggaag
 1800
 atcctgcggc tggggccgct tgcctacacg ctccagaagg gccagcgcag agctgggatg
 1860
 gccactgaga gccccagtga cagcccagaa gatgggtccag gcctgagtcc cttgctctga
 1920
 cagagatgga tctgctagaa ggaacctgga gagcaggacc catggctggg cggctggtga
 1980
 gcagtccagg tgcccaaggg ccagcttgct gctgccc aaa gcagaggaag ccgggctggc
 2040
 tgagggtccg aaaagcctgc aggggcccgg cgagccccag gaagagcctc agctccaggc
 2100
 tggggctctg gctgctggag catctgctgg ctggtggggg ggcccagatt ccccttcacc
 2160
 gccccaggg agggtttccc acctcagagt acaccgaggg gacctgcaga gggggctgtc
 2220
 gggacagcgt ggaataaaca ttatttcaag gaaaaaaaaa aaaaaaa
 2267

<210> 5720

<211> 455

<212> PRT

<213> Homo sapiens

<400> 5720

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Val | Leu | His | Lys | His | Pro | Cys | His | Leu | Val | Thr | Ser | Pro | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Gln | Gln | Arg | Gly | His | Gly | Ala | Val | His | Ala | Ala | Gly | Gln | Gly | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Asp | Val | Pro | Gln | Gly | Leu | His | Pro | Pro | Val | Ala | Pro | Ser | Gly | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Val | Asp | Ser | Ala | Val | Ala | Ala | Leu | Leu | Leu | Arg | Arg | Arg | Gly | Tyr | Gln |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Val | Thr | Gly | Val | Phe | Met | Lys | Asn | Trp | Asp | Ser | Leu | Asp | Glu | His | Gly |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Val | Cys | Thr | Ala | Asp | Lys | Asp | Cys | Glu | Asp | Ala | Tyr | Arg | Val | Cys | Gln |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Ile | Leu | Asp | Ile | Pro | Phe | His | Gln | Val | Ser | Tyr | Val | Lys | Glu | Tyr | Trp |
| | | 100 | | | | | 105 | | | | | | 110 | | |
| Asn | Asp | Val | Phe | Ser | Asp | Phe | Leu | Asn | Glu | Tyr | Glu | Lys | Gly | Arg | Thr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Pro | Asn | Pro | Asp | Ile | Val | Cys | Asn | Lys | His | Ile | Lys | Phe | Ser | Cys | Phe |

| | | | | | |
|---|-----|-----|-----|-----|-----|
| 130 | | 135 | | 140 | |
| Phe His Tyr Ala Val Asp Asn Leu Gly Ala Asp Ala Ile Ala Thr Gly | | | | | |
| 145 | | 150 | | 155 | 160 |
| His Tyr Ala Arg Thr Ser Leu Glu Asp Glu Glu Val Phe Glu Gln Lys | | | | | |
| | 165 | | 170 | | 175 |
| His Val Lys Lys Pro Glu Gly Leu Phe Arg Asn Arg Phe Glu Val Arg | | | | | |
| | 180 | | 185 | | 190 |
| Asn Ala Val Lys Leu Leu Gln Ala Ala Asp Ser Phe Lys Asp Gln Thr | | | | | |
| | 195 | | 200 | | 205 |
| Phe Phe Leu Ser Gln Val Ser Gln Asp Ala Leu Arg Arg Thr Ile Phe | | | | | |
| | 210 | | 215 | | 220 |
| Pro Leu Gly Gly Leu Thr Lys Glu Phe Val Lys Lys Ile Ala Ala Glu | | | | | |
| 225 | | 230 | | 235 | 240 |
| Asn Arg Leu His His Val Leu Gln Lys Lys Glu Ser Met Gly Met Cys | | | | | |
| | 245 | | 250 | | 255 |
| Phe Ile Gly Lys Arg Asn Phe Glu His Phe Leu Leu Gln Tyr Leu Gln | | | | | |
| | 260 | | 265 | | 270 |
| Pro Arg Pro Gly His Phe Ile Ser Ile Glu Asp Asn Lys Val Leu Gly | | | | | |
| | 275 | | 280 | | 285 |
| Thr His Lys Gly Trp Phe Leu Tyr Thr Leu Gly Gln Arg Ala Asn Ile | | | | | |
| | 290 | | 295 | | 300 |
| Gly Gly Leu Arg Glu Pro Trp Tyr Val Val Glu Lys Asp Ser Val Lys | | | | | |
| 305 | | 310 | | 315 | 320 |
| Gly Asp Val Phe Val Ala Pro Arg Thr Asp His Pro Ala Leu Tyr Arg | | | | | |
| | 325 | | 330 | | 335 |
| Asp Leu Leu Arg Thr Ser Arg Val His Trp Ile Ala Glu Glu Pro Pro | | | | | |
| | 340 | | 345 | | 350 |
| Ala Ala Leu Val Arg Asp Lys Met Met Glu Cys His Phe Arg Phe Arg | | | | | |
| | 355 | | 360 | | 365 |
| His Gln Met Ala Leu Val Pro Cys Val Leu Thr Leu Asn Gln Asp Gly | | | | | |
| | 370 | | 375 | | 380 |
| Thr Val Trp Val Thr Ala Val Gln Ala Val Arg Ala Leu Ala Thr Gly | | | | | |
| 385 | | 390 | | 395 | 400 |
| Gln Phe Ala Val Phe Tyr Lys Gly Asp Glu Cys Leu Gly Ser Gly Lys | | | | | |
| | 405 | | 410 | | 415 |
| Ile Leu Arg Leu Gly Pro Ser Ala Tyr Thr Leu Gln Lys Gly Gln Arg | | | | | |
| | 420 | | 425 | | 430 |
| Arg Ala Gly Met Ala Thr Glu Ser Pro Ser Asp Ser Pro Glu Asp Gly | | | | | |
| | 435 | | 440 | | 445 |
| Pro Gly Leu Ser Pro Leu Leu | | | | | |
| 450 | | 455 | | | |

<210> 5721

<211> 400

<212> DNA

<213> Homo sapiens

<400> 5721

ttagacatag ctaaccagac aggcagatca atcagaattc ccccatcaga aagaaaagcc
60

cttatgttag ctatgggata tcatgagaag ggcagagctt tcctgaaaag aaaagaatat
120

ggaatagcct tgccatgtct gttggacgct gacaaatatt tctggtgggc gcttttgtac
180

ttggtgaaca ccagctttaa ggaagatggc ccagactata cagaacacct gccatgccct
 240
 tgagactgca gactttcatc tacaacagtg gttaatgtaa aagagtagtt atggtgtaaa
 300
 ctggtgaatt tcttcttccc ttgtatttc taattgacct ttcctccctg taaagaaaag
 360
 aattttcaag caggtaggat atgctctctt tttctgtaca
 400

<210> 5722

<211> 80

<212> PRT

<213> Homo sapiens

<400> 5722

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Ile | Ala | Asn | Gln | Thr | Gly | Arg | Ser | Ile | Arg | Ile | Pro | Pro | Ser |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Glu | Arg | Lys | Ala | Leu | Met | Leu | Ala | Met | Gly | Tyr | His | Glu | Lys | Gly | Arg |
| | | | 20 | | | | 25 | | | | | 30 | | | |
| Ala | Phe | Leu | Lys | Arg | Lys | Glu | Tyr | Gly | Ile | Ala | Leu | Pro | Cys | Leu | Leu |
| | | | 35 | | | 40 | | | | 45 | | | | | |
| Asp | Ala | Asp | Lys | Tyr | Phe | Trp | Trp | Ala | Leu | Leu | Tyr | Leu | Val | Asn | Thr |
| | 50 | | | | 55 | | | 60 | | | | | | | |
| Ser | Phe | Lys | Glu | Asp | Gly | Pro | Asp | Tyr | Thr | Glu | His | Leu | Pro | Cys | Pro |
| 65 | | | | | 70 | | | 75 | | | | | | 80 | |

<210> 5723

<211> 376

<212> DNA

<213> Homo sapiens

<400> 5723

ntaccacat tttcttcttt tcacccaccc cagccaaaac tcagtgcctt caaggctcgg
 60
 aagaatgtgg agagttttct agaagcctgt cgaaaaatgg gggtgctga ggtatggggg
 120
 ctgctttcta aagagtgggtg gcatgccgga ctcagcggag ccatgtggca tggatgggtg
 180
 gttccattt gcagcggatg tctgctctca gatgaaggca caggctgccc ctgcctgccc
 240
 cagcatgccc cctgccttgc atgccccctg cctgcatgt cacctgtcct acacatcccc
 300
 tgcctgcag gcccattctt gtctgcatg tcacctgtcc tgcacatgcc ctgccttgca
 360
 ctctctctgc acgcgt
 376

<210> 5724

<211> 125

<212> PRT

<213> Homo sapiens

<400> 5724

Xaa Thr Thr Phe Ser Ser Phe His Pro Pro Gln Pro Lys Leu Ser Ala

| | | | |
|---|-----|-----|----|
| 1 | 5 | 10 | 15 |
| Leu Lys Ala Arg Lys Asn Val Glu Ser Phe Leu Glu Ala Cys Arg Lys | | | |
| 20 | 25 | 30 | |
| Met Gly Val Pro Glu Val Trp Gly Leu Leu Ser Lys Glu Trp Trp His | | | |
| 35 | 40 | 45 | |
| Ala Gly Leu Ser Gly Ala Met Trp His Gly Trp Trp Ala Ser Ile Cys | | | |
| 50 | 55 | 60 | |
| Ser Gly Cys Leu Leu Ser Asp Glu Gly Thr Gly Cys Pro Cys Leu Pro | | | |
| 65 | 70 | 75 | 80 |
| Gln His Ala Pro Cys Pro Ala Cys Pro Leu Pro Cys Met Ser Pro Val | | | |
| 85 | 90 | 95 | |
| Leu His Ile Pro Cys Pro Ala Gly Pro Ile Leu Ser Cys Met Ser Pro | | | |
| 100 | 105 | 110 | |
| Val Leu His Met Pro Cys Pro Ala Leu Leu Leu His Ala | | | |
| 115 | 120 | 125 | |

<210> 5725

<211> 1160

<212> DNA

<213> Homo sapiens

<400> 5725

gcttttttttc cttttctccc tccgcgtctc ctttttgact ccctccccct ttatgctcgc
 60
 ccagccctcc ccctgctgct gagaagtggg ggaggggtctc ggccctccagg ttcccgcccc
 120
 accgcgcacg ggcgagcatg gggggcaagc agagcacggc gaccgcgtcc cgggggcccc
 180
 ttcccggggg tctccaccga tgacagcgcc gtgccgccgc cgggaggggc gccccatttc
 240
 gggcactacc ggacggggcg cggggccatg gggctgcgca gcgcatcggt cagctcgggtg
 300
 gcaggcatgg gcatggaccc cagcacggcc ggggggggtgc cttttggcct ctacaccccc
 360
 gcctcccggg gcaccggcga ctccgagagg gcgccggcg gcggaggggtc tgcgtccgac
 420
 tccacctatg cccatggcaa tggttaccag gagacgggcg gcggtcacca tagagacggg
 480
 atgctgtacc tgggctcccg agcctcgctg gcggatgctc tacctctgca catcgcaccc
 540
 aggtgggttca gctcgcatag tggtttcaag tgccccattt gctccaagtc tgtggcttct
 600
 gacgagatgg aaatgcactt tataatgtgt ttgagcaaac ctgcctctc ctacaacgat
 660
 gatgtgctga ctaaagacgc gggtgagtgt gtgatctgcc tggaggagct gctgcagggg
 720
 gacacgatag ccaggctgcc ctgcctgtgc atctatcaca aaagctgcat agactcgtgg
 780
 tttgaagtga acagatcttg tccggaacac cctgcggact gacctgcggg cttgcttget
 840
 gactcctctc aaaggacag agcgccctg ctccaggag gaggtcacc ggaccctggg
 900
 gcagagctga gcttgggaca ccagcgggaa cagggcaccc cttctgcact gacttcaga
 960

tcattggttct ccccttccctcc ctgaggacac caaattggat gagagcaagt ttgagagaag
 1020
 aatgaatcaa ctgctatcct tccccctcacc cctcagccca ggaggggaaag ggcattttct
 1080
 ttttcatctt tgaaaggcat tgtgggtctg tcttttaaagt gtttacaaaa aaattatata
 1140
 aaaaaaagtc tagtgctcgac
 1160

<210> 5726

<211> 273

<212> PRT

<213> Homo sapiens

<400> 5726

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Phe | Phe | Pro | Phe | Leu | Pro | Pro | Arg | Leu | Leu | Phe | Asp | Ser | Leu | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Tyr | Ala | Arg | Pro | Ala | Leu | Pro | Leu | Leu | Leu | Arg | Ser | Gly | Gly | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Arg | Pro | Pro | Gly | Ser | Arg | Pro | Thr | Ala | His | Gly | Arg | Ala | Trp | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Ser | Arg | Ala | Arg | Arg | Pro | Ala | Pro | Gly | Gly | Pro | Phe | Pro | Gly | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ser | Thr | Asp | Asp | Ser | Ala | Val | Pro | Pro | Pro | Gly | Gly | Ala | Pro | His | Phe |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Gly | His | Tyr | Arg | Thr | Gly | Gly | Gly | Ala | Met | Gly | Leu | Arg | Ser | Ala | Ser |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Val | Ser | Ser | Val | Ala | Gly | Met | Gly | Met | Asp | Pro | Ser | Thr | Ala | Gly | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Val | Pro | Phe | Gly | Leu | Tyr | Thr | Pro | Ala | Ser | Arg | Gly | Thr | Gly | Asp | Ser |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Glu | Arg | Ala | Pro | Gly | Gly | Gly | Gly | Ser | Ala | Ser | Asp | Ser | Thr | Tyr | Ala |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| His | Gly | Asn | Gly | Tyr | Gln | Glu | Thr | Gly | Gly | Gly | His | His | Arg | Asp | Gly |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Met | Leu | Tyr | Leu | Gly | Ser | Arg | Ala | Ser | Leu | Ala | Asp | Ala | Leu | Pro | Leu |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| His | Ile | Ala | Pro | Arg | Trp | Phe | Ser | Ser | His | Ser | Gly | Phe | Lys | Cys | Pro |
| | | 180 | | | | | 185 | | | | | | 190 | | |
| Ile | Cys | Ser | Lys | Ser | Val | Ala | Ser | Asp | Glu | Met | Glu | Met | His | Phe | Ile |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Met | Cys | Leu | Ser | Lys | Pro | Arg | Leu | Ser | Tyr | Asn | Asp | Asp | Val | Leu | Thr |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Lys | Asp | Ala | Gly | Glu | Cys | Val | Ile | Cys | Leu | Glu | Glu | Leu | Leu | Gln | Gly |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | |
| Asp | Thr | Ile | Ala | Arg | Leu | Pro | Cys | Leu | Cys | Ile | Tyr | His | Lys | Ser | Cys |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Ile | Asp | Ser | Trp | Phe | Glu | Val | Asn | Arg | Ser | Cys | Pro | Glu | His | Pro | Ala |
| | | | 260 | | | | | 265 | | | | | | 270 | |

Asp

<210> 5727

<211> 1237

<212> DNA

<213> Homo sapiens

<400> 5727

ntgagaaggg aggtgaccac caggactggc tctgtgagta ccacacagtg ggaggggggtg
60
ggggccacca tgtcatcata tcagaaggaa ctggagaaat acagagacat agatgaagat
120
gagatcctaa ggaccttgag ccccgaggag ctagagcagc tggactgcga actacaggag
180
atggatcctg agaacatgct cctgccagct ggactaagac aacgtgacca gacaaagaag
240
agcccaacgg ggccactgga ccgagaggcc cttttgcagt acttgagca acaggcacta
300
gaagtcaaag agcgtgatga cttggtgccc ttcacaggcg agaagaaggg gaaaccctat
360
attcagccca agagggaaat cccagcagag gagcagatca ccctggagcc tgagctggag
420
gaggcactgg cacatgccac agatgctgaa atgtgtgaca ttgcagcaat tctggacatg
480
tacacactga tgagtaacaa gcaatactat gatgccctct gcagtggaga aatctgcaac
540
actgaaggca ttagcagtgt ggtacagcct gacaagtata agccagtgcc ggatgaaccc
600
ccaaatccca caaacattga ggagatacta aagaggggtcc gaagcaatga caaggagctg
660
gaggaggtga acttgaataa tatacaggac atcccaatac ccatgctaag tgagctgtgt
720
gaggcaatga aggcaaatac ctatgtgcgg agcttcagtc tggtagccac gaggagtgg
780
gaccccatg ccaatgcagt ggctgacatg ttgcgtgaga atcgtagcct ccagagccta
840
aacatcgaat ccaacttcat tagcagcaca ggactcatgg ctgtgctgaa ggcagttcgg
900
gaaaatgcca cactcactga gctccgtgta gacaatcagc gccagtggcc tggatgatga
960
gtggagatgg agatggccac cgtgctagag cagtgtccct ctattgtccg ctttggctac
1020
cactttacac agcagggggc acgagctcgg gcagcccagg ccatgaccgg aaacaatgaa
1080
ctacgtcgcc agcaaaagaa gagataacac tgcatttccc tttaccaact agcgtggga
1140
gcactggaca cttaaatoct catctgtcct cctttcctgt aaataaaagc ccttctatcc
1200
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
1237

<210> 5728

<211> 368

<212> PRT

<213> Homo sapiens

<400> 5728

Xaa Arg Arg Glu Val Thr Thr Arg Thr Gly Ser Val Ser Thr Thr Gln

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | 5 | | 10 | | 15 | | | | | | | | | |
| Trp | Glu | Gly | Val | Gly | Ala | Thr | Met | Ser | Ser | Tyr | Gln | Lys | Glu | Leu | Glu |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Lys | Tyr | Arg | Asp | Ile | Asp | Glu | Asp | Glu | Ile | Leu | Arg | Thr | Leu | Ser | Pro |
| | | 35 | | | | | | 40 | | | | | 45 | | |
| Glu | Glu | Leu | Glu | Gln | Leu | Asp | Cys | Glu | Leu | Gln | Glu | Met | Asp | Pro | Glu |
| | | 50 | | | | | | 55 | | | | | 60 | | |
| Asn | Met | Leu | Leu | Pro | Ala | Gly | Leu | Arg | Gln | Arg | Asp | Gln | Thr | Lys | Lys |
| | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Pro | Thr | Gly | Pro | Leu | Asp | Arg | Glu | Ala | Leu | Leu | Gln | Tyr | Leu | Glu |
| | | | | 85 | | | | | 90 | | | | | | 95 |
| Gln | Gln | Ala | Leu | Glu | Val | Lys | Glu | Arg | Asp | Asp | Leu | Val | Pro | Phe | Thr |
| | | | 100 | | | | | | 105 | | | | 110 | | |
| Gly | Glu | Lys | Lys | Gly | Lys | Pro | Tyr | Ile | Gln | Pro | Lys | Arg | Glu | Ile | Pro |
| | | 115 | | | | | | 120 | | | | | 125 | | |
| Ala | Glu | Glu | Gln | Ile | Thr | Leu | Glu | Pro | Glu | Leu | Glu | Glu | Ala | Leu | Ala |
| | | 130 | | | | | 135 | | | | | 140 | | | |
| His | Ala | Thr | Asp | Ala | Glu | Met | Cys | Asp | Ile | Ala | Ala | Ile | Leu | Asp | Met |
| | | | | | 150 | | | | | 155 | | | | | 160 |
| Tyr | Thr | Leu | Met | Ser | Asn | Lys | Gln | Tyr | Tyr | Asp | Ala | Leu | Cys | Ser | Gly |
| | | | | 165 | | | | | 170 | | | | | | 175 |
| Glu | Ile | Cys | Asn | Thr | Glu | Gly | Ile | Ser | Ser | Val | Val | Gln | Pro | Asp | Lys |
| | | | 180 | | | | | | 185 | | | | 190 | | |
| Tyr | Lys | Pro | Val | Pro | Asp | Glu | Pro | Pro | Asn | Pro | Thr | Asn | Ile | Glu | Glu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Ile | Leu | Lys | Arg | Val | Arg | Ser | Asn | Asp | Lys | Glu | Leu | Glu | Glu | Val | Asn |
| | | 210 | | | | | 215 | | | | | 220 | | | |
| Leu | Asn | Asn | Ile | Gln | Asp | Ile | Pro | Ile | Pro | Met | Leu | Ser | Glu | Leu | Cys |
| | | 225 | | | 230 | | | | | 235 | | | | | 240 |
| Glu | Ala | Met | Lys | Ala | Asn | Thr | Tyr | Val | Arg | Ser | Phe | Ser | Leu | Val | Ala |
| | | | | 245 | | | | | 250 | | | | | | 255 |
| Thr | Arg | Ser | Gly | Asp | Pro | Ile | Ala | Asn | Ala | Val | Ala | Asp | Met | Leu | Arg |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Glu | Asn | Arg | Ser | Leu | Gln | Ser | Leu | Asn | Ile | Glu | Ser | Asn | Phe | Ile | Ser |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Ser | Thr | Gly | Leu | Met | Ala | Val | Leu | Lys | Ala | Val | Arg | Glu | Asn | Ala | Thr |
| | | 290 | | | | | 295 | | | | | 300 | | | |
| Leu | Thr | Glu | Leu | Arg | Val | Asp | Asn | Gln | Arg | Gln | Trp | Pro | Gly | Asp | Ala |
| | | | | 310 | | | | | | 315 | | | | | 320 |
| Val | Glu | Met | Glu | Met | Ala | Thr | Val | Leu | Glu | Gln | Cys | Pro | Ser | Ile | Val |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Arg | Phe | Gly | Tyr | His | Phe | Thr | Gln | Gln | Gly | Pro | Arg | Ala | Arg | Ala | Ala |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Gln | Ala | Met | Thr | Arg | Asn | Asn | Glu | Leu | Arg | Arg | Gln | Gln | Lys | Lys | Arg |
| | | 355 | | | | | 360 | | | | | 365 | | | |

<210> 5729

<211> 381

<212> DNA

<213> Homo sapiens

<400> 5729

naaattttatt actacggatc acagcagcaa cgggcgggaa gggcggcgcc agactcattt

60

gccccgcagg tagatcttgg gggctctgcc gcttcctggg gcttccttta gccccgcctt
 120
 cagccagatg cgcctcaggt cttctctgaa cttgatctgc aagacgcaga gagagggacc
 180
 gccaaagtaat tcgtggcaaa gaaacgtgtt ctcagcactt tgccctccca gggccaagca
 240
 gggggccact cacctgcttg cgtctcaggc gtccttcctg gaccttcctc cgcaggaacc
 300
 gcgtcttctt caccagcttc cggtaactgt ggtgggtcat cttccgccgg cggatcttca
 360
 gcacgttttt gcactaaatt t
 381

<210> 5730

<211> 64

<212> PRT

<213> Homo sapiens

<400> 5730

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Val | Ala | Lys | Lys | Arg | Val | Leu | Ser | Thr | Leu | Pro | Ser | Gln | Gly | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Gly | Gly | His | Ser | Pro | Ala | Cys | Val | Ser | Gly | Val | Pro | Pro | Gly | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Ser | Ala | Gly | Thr | Ala | Ser | Ser | Ser | Pro | Ala | Ser | Gly | Thr | Cys | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Ser | Ser | Ser | Ala | Gly | Gly | Ser | Ser | Ala | Arg | Phe | Cys | Thr | Lys | Phe |
| | 50 | | | | | | 55 | | | | 60 | | | | |

<210> 5731

<211> 891

<212> DNA

<213> Homo sapiens

<400> 5731

ccggccgcgt ccaggctgcg ggccgaagcc gggctcgggg cgctgccgcg gcgggcgctc
 60
 gccagtagt tgctcttctt gcggctctac ccggtgctca ccaaggcggc caccagtggc
 120
 attttgtcag cacttgggaa cttcctggcc cagatgattg agaagaagcg gaaaaaagaa
 180
 aactctagaa gtctggatgt cgggtgggct ctgagatatg ccgtttacgg gttcttcttc
 240
 acagggccgc tgagtcactt cttctacttc ttcatggaac attggatccc tctgaggtc
 300
 cccctggcag ggctcaggag gcttctcttg gaccgcctcg tctttgcacc ggccttctc
 360
 atgttgttct tctcatcat gaactttctg gaggggaaag acgcctcagc cttcgccgcc
 420
 aagatgaggg ggggcttctg gccggcgctg aggatgaact ggcgggtgtg gacgccacta
 480
 cagttcatca acatcaacta cgctcctctg aagttccggg tgctcttcgc caacctggca
 540
 gctctgttct ggtatgccta cctggcctcc ttggggaagt gacgaccgct gggagaacat
 600

caggtgcact gtggacgtgg gtctgggggt ctcacccgcc cagcgagagc agaaccaatc
 660
 cagtcaggat gtcactgact ctaaatacagg tgattcaaga tgcccaaaaa tgatggatag
 720
 agaaacagaa atctctgaat gtcagaaccc tgtcttttaa aaaggcagtc actgccttca
 780
 ggtgggtgctg cccagaaaac ttaaaattta gtcgaggcag tttcaattgt tactgtggac
 840
 cgaattagga tcacaataaa tgataatgca ggttcttcaa aaaaaaaaaa a
 891

<210> 5732

<211> 193

<212> PRT

<213> Homo sapiens

<400> 5732

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Ala | Ala | Ser | Arg | Leu | Arg | Ala | Glu | Ala | Gly | Leu | Gly | Ala | Leu | Pro |
| 1 | | | 5 | | | | | 10 | | | | | 15 | | |
| Arg | Arg | Ala | Leu | Ala | Gln | Tyr | Leu | Leu | Phe | Leu | Arg | Leu | Tyr | Pro | Val |
| | | 20 | | | | | | 25 | | | | 30 | | | |
| Leu | Thr | Lys | Ala | Ala | Thr | Ser | Gly | Ile | Leu | Ser | Ala | Leu | Gly | Asn | Phe |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Ala | Gln | Met | Ile | Glu | Lys | Lys | Arg | Lys | Lys | Glu | Asn | Ser | Arg | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Asp | Val | Gly | Gly | Pro | Leu | Arg | Tyr | Ala | Val | Tyr | Gly | Phe | Phe | Phe |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Thr | Gly | Pro | Leu | Ser | His | Phe | Phe | Tyr | Phe | Phe | Met | Glu | His | Trp | Ile |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Pro | Pro | Glu | Val | Pro | Leu | Ala | Gly | Leu | Arg | Arg | Leu | Leu | Leu | Asp | Arg |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Leu | Val | Phe | Ala | Pro | Ala | Phe | Leu | Met | Leu | Phe | Phe | Leu | Ile | Met | Asn |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Phe | Leu | Glu | Gly | Lys | Asp | Ala | Ser | Ala | Phe | Ala | Ala | Lys | Met | Arg | Gly |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Gly | Phe | Trp | Pro | Ala | Leu | Arg | Met | Asn | Trp | Arg | Val | Trp | Thr | Pro | Leu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Gln | Phe | Ile | Asn | Ile | Asn | Tyr | Val | Pro | Leu | Lys | Phe | Arg | Val | Leu | Phe |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Ala | Asn | Leu | Ala | Ala | Leu | Phe | Trp | Tyr | Ala | Tyr | Leu | Ala | Ser | Leu | Gly |
| | | 180 | | | | | | 185 | | | | | 190 | | |

Lys

<210> 5733

<211> 950

<212> DNA

<213> Homo sapiens

<400> 5733

nnccacgtcg tcattctccc cggggacggt gggagtggca cggccgcat cagcttcaca
 60
 ggggccttga aaattccagg cgtgatagag ttctcactgt gtctgctgtt tgccaagctg
 120

gtcagctata ctttcctctt ctggctgccc ctgtacatca cgaatgtgga tcaccttgat
 180
 gccaaaaagg cggggtgcac aggtagcccc gaccctctca ggcattccag ccacagaaca
 240
 tcaaagttag cgagtactgc gctggctgtg gcttcagaga acctgtatgt gccacgtgga
 300
 aaaacaggac accagagccc accagacagt gccggccagc agagaagcag agagccagcg
 360
 ccacacaaca tcaagaaggc cgacaaccag gttggaaacc aagacggagc tcagaccac
 420
 cacatcgccc cagaggcttt tccagcacc atgatgttcc ggactgacct aaaaactaat
 480
 tgtcgagaag ccaaggggtga ggaggcagga agcacctccg gttggaggca cccaggcttg
 540
 ccagccacag agcgccccga agtcaccgtc atcccagccc ctggccttcc tgccgcctc
 600
 cggggccatg gcgctgctgt tcagctcagg cacaggggca cagcagaggt ttgggaagcg
 660
 gtctcccccac cggcactggg attggcgggt ccaagcccag caaccggctt cgctccacaa
 720
 cacacaccac acctgggact gtttttaata catagcaaca gactgggtta tttatttaag
 780
 atgtgtattg tgtcatatga agtttaagag acataaatgg cattttgtta tttattaaga
 840
 caaactccaa ttgttctctg gctgtttttt tcagttgtgt ctagcaaaat acttatctgc
 900
 cttttgaaat aaaatgtttt tgtttaaaaa atctcaaaaa aaaaaaaaaa
 950

<210> 5734

<211> 82

<212> PRT

<213> Homo sapiens

<400> 5734

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | His | Val | Val | Ile | Leu | Pro | Gly | Asp | Gly | Gly | Ser | Gly | Thr | Ala | Ala |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Ile | Ser | Phe | Thr | Gly | Ala | Leu | Lys | Ile | Pro | Gly | Val | Ile | Glu | Phe | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Cys | Leu | Leu | Phe | Ala | Lys | Leu | Val | Ser | Tyr | Thr | Phe | Leu | Phe | Trp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Pro | Leu | Tyr | Ile | Thr | Asn | Val | Asp | His | Leu | Asp | Ala | Lys | Lys | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Cys | Thr | Gly | Ser | Pro | Asp | Pro | Leu | Arg | His | Ser | Ser | His | Arg | Thr |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ser | Lys | | | | | | | | | | | | | | |

<210> 5735

<211> 4241

<212> DNA

<213> Homo sapiens

<400> 5735

ctagaattca gcgggcgctg aattctagcg agcaggcggc aggcacggtc cgtgcggagc
60
aggcgagcga gcggggaagac gcagccacct tcctcaccag ccagcccaca gcggtttgtt
120
ccccttctcg ggagtgcgcc aatgcctggg ccgacccaaa ccctgtcccc aaatggcgag
180
aacaacaacg acatcatcca ggataataac gggaccatca ttcctttccg gaagcacaca
240
gtgcgcgggg agcgttccta cagttgggga atggcgggtca atgtgtattc tacctcgata
300
accaagaga ctatgagcag acatgacatc attgcatggg ttaatgacat agtatcttta
360
aactacacaa aagtggaaca gctttgttca ggagcggcct attgccaatt catggacatg
420
ctcttccttg gctgcattag tttgaagaaa gtaaaatttc aagcaaagct ggaacatgaa
480
tatattcaca attttaaact tctgcaagca tcatttaagc gaatgaacgt tgataaggta
540
attccagtgg agaagctagt gaaaggacgt ttccaggaca acctggattt tattcaatgg
600
tttaagaaat tctatgatgc taactacgat ggggaaggagt atgatcctgt agaggcacga
660
caagggcaag atgcaattcc tcctcctgac cctgggtgaac agatcttcaa cctgccaaaa
720
aagtctcacc atgcaaactc cccacagca ggtgcagcta aatcaagtcc agcagctaaa
780
ccaggatcca caccttctcg accctcatca gccaaaaggg cttcttccag tggctcagca
840
tccaaatccg ataaagattt agaaacgcag gtcatacagc ttaatgaaca ggtacattca
900
ttaaaacttg ccttgaagg cgtggaaaag gaaagggatt tctactttgg gaagttgaga
960
gagatcgagc tactctgcca agaacacggg caggaaaatg atgacctcgt gcagagacta
1020
atggacatcc tgtatgcttc agaagaacac gagggccaca cagaagagcc ggaagcagag
1080
gagcaagccc acgaacagca gccccgcag caggaagagt actgaccac cccggctgct
1140
cttgacactt ccattgtgtg tgggaacggt tcttctggag aattggaaca tgtgtggccc
1200
caagctcaac agaaaccagt tgttcccaat ctgccgttac catcaacgca ctgttgcata
1260
tgccagccac tgcgcttggt tcccattttc tttgccagg tgtattagcg gacggccctc
1320
tggccacctc cccgagagat cgtaggggtca catacatcca acttcaccac ttggctgctt
1380
gagattgggt ctgctctttt cttcatttct ttccagaaca actctttccc accccaacac
1440
cactgccacc acccctcttt ttatcctggg gtgaaacaat ggtaatttga tatatggtat
1500
ttatattggc atttttcaac ccagtgtcac tagatgtcac acacatttgt ggtgctttga
1560
tgtttgcaag tctaacctct gaacataaat ttggtcaaat aattggaaca aagggaaca
1620

gatacttgat atgaaagcca taatgacggt gacttggtgc gtgggggaaa acataaggtc
1680
atcttctccc tctactcaca atactaaagg gaaaaaatgg attcaaagct aggatttcag
1740
ggcccagcag tgttctctca tcagcatggt agacaactac acagtatggt gttagttttg
1800
aaagacattc actcaaggaa aacaccatct caactttgcc cgctcaccat gtcccttgcc
1860
cccatgtagc ccatttccca gggtatgctc ttttctttct cagggtcctc tttggtgggc
1920
agccactccc cgagatggtg ccatcagttt tctgcagtcc aaagagggta tgggttaggta
1980
cggtctctcc tgctcattc ctcttctctc ttgtgtaggt ttcagccaca aaactgtcat
2040
tactcttagg ggacccctac taaagggtaa cttcaggtgt gcagccctga gctccaaggc
2100
tctgcaccat gccacacact tgctgtaagg ctagaagtga agaccttatt aataggagca
2160
taattgcgag ggagaatcat ggttctgcag tctggtgtag aactggaat aacagcacag
2220
aaaaatctat gactcccaat atcttctaga ataaagaatt ttccctcttt aacacaaggg
2280
cctccttgt cattgacctt agctaaacca tggcaattca taaatagagg aaacattaat
2340
gaattaaaag cattccttat tttttaacta atatttgtac attttcttag tctctttcca
2400
agtctttgcc tctttttttt ctttattttt attttttctt ttgacagatg gtatcccttc
2460
ctggatcatt catttcacct tggtttctaa ctttaggttt actttcactt gttatttgac
2520
ttagcaggtg caacaaaaac aagaaacaaa tgtgcccacc ccactttccg cttaactgaa
2580
aagcttaaaa taaatttctg aattatgtat cctgaagctt tgaaatttct ttattaatcg
2640
atgaaatatg aattctaaat tctagcattg aagcttttca ccaaagaag tctctccaaa
2700
ataaatcttt tgcagcaaag tgatatttat tgagttatgt ggaaaagatg gcttgtattt
2760
ttcagattat tacaacacac tgtgcagaat tagacagatg ttccgtgggtg tttggtttcc
2820
ctttcttctc tctcctgctc actctgcatt atagcagcag cttatttctc taaggctgga
2880
cagcctggct ctcggcagtg acgtcctccc acacctgggtc acaagtagta gtggctgtgc
2940
tatacccagc atcatgctta acagcgtgtt gcccttctga gcctgttgta ctactgatc
3000
tctttaaaaa caaaaaatag ctcttgtaaa aggtcacaaat aactctatgc acctgatact
3060
gcagtgggtc ctaggccatt cttcatctgc tctggacatc tcagtcatac ccaatgctca
3120
gtggatcatg accaaactcc tgtcatgtgg atgcacgtga gtgggttagca gggagtcagg
3180
atcctgcctt ctccagcaac cccttactgc tgtataactt gcataagcct ccctgggtgac
3240

tcttgcagga accactccat tgccctccag ctccccagcc ttctcagtta taaacatgct
 3300
 ggccagatct cttagcctgc aaagagaact ttccccagtc accatagacc attctccttc
 3360
 ctgaaggctt ggggcagacc attcgtttat ttagagaaga gctatacatt cttctttctg
 3420
 gtcccatctt aaacgtcttc tgttgtgctg cccccagat ggtgtctcag atgctttggg
 3480
 gaatctttta cagctgaatt tgagtcagtc ctcttaggct gcacctccag cctctgcaga
 3540
 tccccctca tttcccatgg atgggtgggac cccattattc tctcatctcg gcattcaggg
 3600
 aacagtttcc ttagcggccc ctggtcacat gtcctcgggc tgggcaggaa gcgtccctgg
 3660
 gtgcgtgctc cacttctccc tctcaggaag cccagtttca tccttagtac cccccctcgt
 3720
 gcccgctgct ggctgggttat agcacttcca ctgctactgt cagataggaa gtgatcgaag
 3780
 cagggggcaa agagaaagcc catatttggt ctaagcagaa aagcaggaaa aaaaaaaaaa
 3840
 aagaaagaaa aacacctggt gacctgagag aagtaaattc cagaaggaa ccaagaactc
 3900
 ttcccttccc tggtagtat ttccattatt ccgttaaggt ttaatatgca ttcagattac
 3960
 ttttactaaa taggacacca taaagctttt gttatatatt aaatgtaaac tgaaaggaat
 4020
 gtaaacatat gtattgttaa ttataaatat agataagtaa tgacataata gatgaaaaag
 4080
 tcttattcag atgtatcaca ttcattttac attaccacc tattgtcgca tggtagaata
 4140
 gttttttgtc tctgaatatg tgaataactt gacttgcatt gatcttttta catatttaat
 4200
 aaaaaaaaaa gtatatgtta aaaaaaaaaa aaaaaaaaaa a
 4241

<210> 5736

<211> 327

<212> PRT

<213> Homo sapiens

<400> 5736

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Gly | Pro | Thr | Gln | Thr | Leu | Ser | Pro | Asn | Gly | Glu | Asn | Asn | Asn |
| 1 | | | 5 | | | | | 10 | | | | | 15 | | |
| Asp | Ile | Ile | Gln | Asp | Asn | Asn | Gly | Thr | Ile | Ile | Pro | Phe | Arg | Lys | His |
| | | 20 | | | | | 25 | | | | | 30 | | | |
| Thr | Val | Arg | Gly | Glu | Arg | Ser | Tyr | Ser | Trp | Gly | Met | Ala | Val | Asn | Val |
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Tyr | Ser | Thr | Ser | Ile | Thr | Gln | Glu | Thr | Met | Ser | Arg | His | Asp | Ile | Ile |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Ala | Trp | Val | Asn | Asp | Ile | Val | Ser | Leu | Asn | Tyr | Thr | Lys | Val | Glu | Gln |
| 65 | | | 70 | | | | | | 75 | | | | | 80 | |
| Leu | Cys | Ser | Gly | Ala | Tyr | Cys | Gln | Phe | Met | Asp | Met | Leu | Phe | Pro | |
| | | | 85 | | | | 90 | | | | | 95 | | | |
| Gly | Cys | Ile | Ser | Leu | Lys | Lys | Val | Lys | Phe | Gln | Ala | Lys | Leu | Glu | His |

```
<210> 5737
<211> 340
<212> DNA
<213> Homo sapiens
```

```
<210> 5738
<211> 99
<212> PRT
<213> Homo sapiens
```

<400> 5738

```

Met Leu Pro Pro Trp Pro Ile Ser Ser His Gln Val Arg Met Ala Leu
 1           5           10           15
Gln His Leu Pro Leu Arg Leu Gln Leu Pro Ser Gln Val His Gln Glu
          20           25           30
Thr Thr Gly His His Trp Gln Trp Arg Gly Asp Met Glu His Gly Leu
          35           40           45
Gly Ser Arg Leu Leu Ala Pro Asp Val Gln Pro Gln Thr Pro Pro Val
          50           55           60
Met Gly Glu Val Trp Arg Pro Val Gln Leu Ser Gln Gly His Ala His
65           70           75           80
Leu Ser Leu Gly Ser Val Gly Lys Ala Tyr Pro Lys Ser His Ile Gln
          85           90           95
Gly Gly Xaa

```

<210> 5739

<211> 780

<212> DNA

<213> Homo sapiens

<400> 5739

```

actttcataa ttgtaacatt gaaatcttta atctggaata tgtactggca taaagagtga
60
ggcacataca tggctttact attttccaga gggccaactg cttttactga ataatccatt
120
ttactcgтта attggaacaa cctctagcct gtactaaatt tccatattta tttggcccgt
180
ttcaaagtcc tctattctct gctcatctgt ccacatctaa gtgctttaac tattgtggct
240
ttataaaaata ttccaatatc ccataggacc ttatccttag tacttcctat tttaaagttt
300
tccttgcaga caggtacttt aaataccatc tcacagcacc catcatgtcc tatcttcagg
360
aaataaaaatc tctgggtatt tccaagggaa gtgaaggact gacaccatga ttagaaagca
420
gagccagcac catggcccgt ccctgagcat gtccagcaaa ccctgccagg ctctgcagct
480
cctgagcacc ctgccttcgg gtctgccagt gtgtgggggc cagaagagaa aaacaacca
540
gggggaatgc ctcttcccc cagcaggaaa gcagcttggt catcatctgt ctgaaagcag
600
gtgctgcagc agctggcaac aaagccactc tgaaaggagc tgtgtgcact gcctgtctgg
660
aaggccatgc cagagtccat cgttgcctcc accctacctg tgcaggaaac ctggacatca
720
ccacttcaag gccctacctt cctttctggg cagagcccaa ccacaataaa caggacgcgt
780

```

<210> 5740

<211> 120

<212> PRT

<213> Homo sapiens

<400> 5740

```

Met Ile Arg Lys Gln Ser Gln His His Gly Pro Ser Leu Ser Met Ser
 1           5           10          15
Ser Lys Pro Cys Gln Ala Leu Gln Leu Leu Ser Thr Leu Pro Ser Gly
          20          25          30
Leu Pro Val Cys Gly Gly Gln Lys Arg Lys Thr Thr Gln Gly Glu Cys
          35          40          45
Leu Leu Pro Pro Ala Gly Lys Gln Leu Gly His His Leu Ser Glu Ser
          50          55          60
Arg Cys Cys Ser Ser Trp Gln Gln Ser His Ser Glu Arg Ser Cys Val
65          70          75          80
His Cys Leu Ser Gly Arg Pro Cys Gln Ser Pro Ser Leu Pro Pro Pro
          85          90          95
Tyr Leu Cys Arg Lys Pro Gly His His His Phe Lys Ala Leu Pro Ser
          100         105         110
Phe Leu Gly Arg Ala Gln Pro Gln
          115         120

```

<210> 5741

<211> 2444

<212> DNA

<213> Homo sapiens

<400> 5741

```

ggcggctgct gctccggggcc tgggcacagc aagcggcgac gtcaagctcc cggggttggc
60
gcggttggcg ggggcagtcc cgagcgtgag gaggtcggcg caggctacaa cagtgaggac
120
gagtatgagg cggctgcagc acgcatcgag gctatggacc ctgccactgt cgagcagcag
180
gagcattggt ttgaaaaggc cctacgagac aagaagggt tcatcatcaa gcagatgaag
240
gaggatggcg cctgtctctt ccgggctgta gctgaccagg tgtatggaga ccaggacatg
300
catgaggttg tgcgaaagca ttgcatggac tatctgatga agaatgccga ctacttctcc
360
aactatgtca cagaggactt taccacctac attaacagga agcggaaaaa caattgccat
420
ggcaaccaca ttgagatgca ggccatggca gagatgtaca accgtcctgt ggaggtgtac
480
cagtacagca cagaacccat caacacattc catgggatac atcaaaacga ggacgaaccc
540
attcgtgtta gctaccatcg gaatatccac tataattcag tggatgaatcc taacaaggcc
600
accattggtg tggggctggg cctgccatca ttcaaaccag ggtttgcaga gcagtctctg
660
atgaagaatg ccataaaaaac atcggaggag tcatggattg aacagcagat gctagaagac
720
aagaaacggg ccacagactg ggaggccaca aatgaagcca tcgaggagca ggtggctcgg
780
gaatcctacc tgcagtgggt gcgggatcag gagaaacagg ctgccaggt ccgaggcccc
840
agccagcccc ggaaagccag cgccacatgc agttcggcca cagcagcagc ctccagtggc
900

```

ctggaggagt ggactagccg gtccccgcgg cagcggagtt cagcctcgtc acctgagcac
960
cctgagctgc atgctgaatt gggcatgaag ccccttccc caggcactgt tttagctctt
1020
gccaaacctc cttcgccctg tgcgccaggt acaagcagtc agttctcggc aggggcccagc
1080
cgggcaactt ccccccttgt gtccctctac cctgctttgg agtgccgggc cctcattcag
1140
cagatgtccc cctctgcctt tggctctgaat gactgggatg atgatgagat cctagcttcg
1200
gtgctggcag tgtcccaaca ggaataccta gacagtatga agaaaaacaa agtgcacaga
1260
gacccgcccc cagacaagag ttgatggaga ccaggggatt ggacaccatc tcccaacccc
1320
agtactcctg ctctccggtg ccacctcacc ttctttggct tcttccctct tgctccttc
1380
tgttctttct gctctccctt cttttccctc ctctcactt ccctctggct agcccacccc
1440
tgcactctct ctcatcgccg ctgccactat cacctgtctc tctgccagct gatgtgcctt
1500
gttgcccccc accccatccc gcacagaacc atccctgcat tccacagggg actcgggcaa
1560
gggtgccgaa gatagacaag aggcacacag agacagacca actggcagcc aggcagcccc
1620
agaggagaga gacattcaga cagaggaaag tctccctgcc ctcattcct tccaagatga
1680
gaaaaacttg ccgccacccc ccgacactga tgccagggag gtgggaggaa gaagtgggaa
1740
atttcccttc ccagtacccc caagaacgtc tgagccttca atgttgaatt ttttctttat
1800
taaaattact tttatcttat aaaatcaact aatcaaaaat gatatagacg acagcactgg
1860
ctctgtgaag gtggcatctt tctgggcagg caggccatgg ggcattggagg agggtgcaaa
1920
gatatgggtt gctgtcttct ggctccagc tgcattggagg ccggcccagg gtctagggtg
1980
tgcactgggc aagggcaggg cggcaggtgt caggccggct tggacaatga aaccctgacc
2040
ttgctgcatt ccttttgctt ccaccaccac tagcttcttt ggaatcttgg ggtgggggtc
2100
atctttgggg attatggctg ccaccggga tttgagtgtg gggagtgtgg gagcagcctt
2160
ggcagatggg gcacccgtgc cctgcagggt ttgacaagat ccgccatctg taatgtcctt
2220
ggcacaataa aaccaaagt cagtttccct gagcgactct gttctgtgtg gggcaggggt
2280
tgggcgggccc tctgggcaga ggatgcaatg gcacggacct tggcttgacc tcagaggtgt
2340
gaatgtctc cagcagggtc tgtctggggg cctggagttt gtatttgatt tgctgcttat
2400
taaacctcct tctggacctt ttgccactgg aaaaaaaaaa aaaa
2444

<210> 5742

<211> 427

<212> PRT

<213> Homo sapiens

<400> 5742

Gly Gly Cys Cys Ser Gly Pro Gly His Ser Lys Arg Arg Arg Gln Ala
 1 5 10 15
 Pro Gly Val Gly Ala Val Gly Gly Gly Ser Pro Glu Arg Glu Glu Val
 20 25 30
 Gly Ala Gly Tyr Asn Ser Glu Asp Glu Tyr Glu Ala Ala Ala Ala Arg
 35 40 45
 Ile Glu Ala Met Asp Pro Ala Thr Val Glu Gln Gln Glu His Trp Phe
 50 55 60
 Glu Lys Ala Leu Arg Asp Lys Lys Gly Phe Ile Ile Lys Gln Met Lys
 65 70 75 80
 Glu Asp Gly Ala Cys Leu Phe Arg Ala Val Ala Asp Gln Val Tyr Gly
 85 90 95
 Asp Gln Asp Met His Glu Val Val Arg Lys His Cys Met Asp Tyr Leu
 100 105 110
 Met Lys Asn Ala Asp Tyr Phe Ser Asn Tyr Val Thr Glu Asp Phe Thr
 115 120 125
 Thr Tyr Ile Asn Arg Lys Arg Lys Asn Asn Cys His Gly Asn His Ile
 130 135 140
 Glu Met Gln Ala Met Ala Glu Met Tyr Asn Arg Pro Val Glu Val Tyr
 145 150 155 160
 Gln Tyr Ser Thr Glu Pro Ile Asn Thr Phe His Gly Ile His Gln Asn
 165 170 175
 Glu Asp Glu Pro Ile Arg Val Ser Tyr His Arg Asn Ile His Tyr Asn
 180 185 190
 Ser Val Val Asn Pro Asn Lys Ala Thr Ile Gly Val Gly Leu Gly Leu
 195 200 205
 Pro Ser Phe Lys Pro Gly Phe Ala Glu Gln Ser Leu Met Lys Asn Ala
 210 215 220
 Ile Lys Thr Ser Glu Glu Ser Trp Ile Glu Gln Gln Met Leu Glu Asp
 225 230 235 240
 Lys Lys Arg Ala Thr Asp Trp Glu Ala Thr Asn Glu Ala Ile Glu Glu
 245 250 255
 Gln Val Ala Arg Glu Ser Tyr Leu Gln Trp Leu Arg Asp Gln Glu Lys
 260 265 270
 Gln Ala Arg Gln Val Arg Gly Pro Ser Gln Pro Arg Lys Ala Ser Ala
 275 280 285
 Thr Cys Ser Ser Ala Thr Ala Ala Ala Ser Ser Gly Leu Glu Glu Trp
 290 295 300
 Thr Ser Arg Ser Pro Arg Gln Arg Ser Ser Ala Ser Ser Pro Glu His
 305 310 315 320
 Pro Glu Leu His Ala Glu Leu Gly Met Lys Pro Pro Ser Pro Gly Thr
 325 330 335
 Val Leu Ala Leu Ala Lys Pro Pro Ser Pro Cys Ala Pro Gly Thr Ser
 340 345 350
 Ser Gln Phe Ser Ala Gly Ala Asp Arg Ala Thr Ser Pro Leu Val Ser
 355 360 365
 Leu Tyr Pro Ala Leu Glu Cys Arg Ala Leu Ile Gln Gln Met Ser Pro
 370 375 380
 Ser Ala Phe Gly Leu Asn Asp Trp Asp Asp Asp Glu Ile Leu Ala Ser

```

385          390          395          400
Val Leu Ala Val Ser Gln Gln Glu Tyr Leu Asp Ser Met Lys Lys Asn
          405          410          415
Lys Val His Arg Asp Pro Pro Pro Asp Lys Ser
          420          425

```

<210> 5743
 <211> 550
 <212> DNA
 <213> Homo sapiens

```

<400> 5743
nngcgccaga ctcatttgcc ccgcaggtag atcttggggg tctgccagcc cttcgggggc
60
ttccttttagc cccgccttca gccagatgcy cctcaggtct ttctcgaact tgatctgctt
120
gcgtctcagg cgtccctcct ggaccttccc ctatctggct gggcggacac tggtaggatt
180
gcggtggagc cacatgtcct gcggtcccgg tatccagtct gggcaggaag cagcggggccg
240
tgagccagct ctccaggggg ctgacggaca tcttctctggg gaccagcatc tcctccagct
300
ccagctgggc ccccttgcca gggagagagg ccgccctacc tgggccggcc ggcgatgtgc
360
tgtaaagggg cccgcagacc cggctgcccc actccagaga cgggccaagg cgggcggccg
420
ccgaaaggtc ccagaacggg gaggccggcc ccctccccgg gttcaccccc gcgcgaatcg
480
cgttgcctgg cgcccnngga ccctctcggc tggaccccgg gcccgctgc cgcagcgccc
540
ggcgccctca
550

```

<210> 5744
 <211> 95
 <212> PRT
 <213> Homo sapiens

```

<400> 5744
Arg Thr Ser Ser Trp Gly Pro Ala Ser Pro Pro Ala Pro Ala Gly Pro
1          5          10          15
Pro Cys Glu Gly Glu Arg Pro Pro Tyr Leu Gly Arg Pro Ala Met Cys
20          25          30
Cys Lys Gly Ala Arg Arg Pro Gly Cys Pro Thr Pro Glu Thr Gly Gln
35          40          45
Gly Gly Arg Pro Pro Lys Gly Pro Arg Thr Gly Arg Pro Ala Pro Ser
50          55          60
Pro Gly Ser Pro Pro Arg Glu Ser Arg Cys Leu Ala Pro Xaa Asp Pro
65          70          75          80
Leu Gly Trp Thr Pro Gly Pro Pro Ala Ala Ala Pro Gly Ala Leu
85          90          95

```

<210> 5745
 <211> 849

<212> DNA

<213> Homo sapiens

<400> 5745

```

aaagtttttt tttttttctg cttcaggcac acggggaacc acgcgtttta atcaacgtat
60
cgataaaaaa caccagggca cggacactcc aggggaaatg cttattgagt aaagtatccg
120
aggaagtgat gcagggcagg taaacagctg gtgctcagca gcgagaggac gcgtcactct
180
gccgttctgc agggtgacgc cctccccgta cctcgctgag agccacctgc agacacagca
240
ggccacagca gaatgcacag gtcactgttg taggggaaca aatcgtaatg cccagagaaa
300
acctgatagt gaaatgtaaa cagacaggac agggtggttc caggtggcca ccaccgccag
360
gcccttcccc tgattgatct gagagcttca cagccggcgg cactgggacc catttccaga
420
aacactggaa caccaggtct ctcagatgcc cgcgggaggg gccccaggga ggcctttctc
480
agcatcagct tttgggtgac aaaccccata cagcaaaact gtacaaatac acacaacgga
540
ccccagctg acagtgagac caggacccta ggaaggtcag gtggtggtga agtcatcccc
600
tctccaaccg agcagagcct ggggttgggc tctgatgacc tcccgggcaa agtgtccagg
660
tgagggaagc aaactcccaa atggggcaca aaggtaataa aaagcagctg agagattgcg
720
ggatggggtc gggggcactt ggccgacacc ttctgcctcg cctggccggg cggggccagc
780
ctctcgccac aggatggagg gtgactgtgc accctgctcc atgtacagga cgggttgagg
840
gtcccatgg
849

```

<210> 5746

<211> 140

<212> PRT

<213> Homo sapiens

<400> 5746

```

Met Thr Ser Pro Pro Asp Leu Pro Arg Val Leu Val Ser Leu Ser
1          5          10          15
Ala Gly Gly Pro Leu Cys Val Phe Val Gln Phe Cys Cys Met Gly Phe
20          25          30
Val Thr Gln Lys Leu Met Leu Arg Lys Ala Ser Leu Gly Pro Leu Pro
35          40          45
Arg Ala Ser Glu Arg Pro Gly Val Pro Val Phe Leu Glu Met Gly Pro
50          55          60
Ser Ala Ala Gly Cys Glu Ala Leu Arg Ser Ile Thr Gly Arg Ala Trp
65          70          75          80
Arg Trp Trp Pro Pro Gly Thr Thr Leu Ser Cys Leu Phe Thr Phe His
85          90          95
Tyr Gln Val Phe Ser Gly His Tyr Asp Leu Phe Pro Tyr Asn Ser Asp

```

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| | 100 | | 105 | | 110 |
| Leu | Cys | Ile | Leu | Leu | Trp |
| | | | Pro | Ala | Val |
| | | | Ser | Ala | Gly |
| | | | Gly | Gly | Ser |
| | | | Gln | Arg | |
| | 115 | | 120 | | 125 |
| Gly | Thr | Gly | Arg | Ala | Ser |
| | | | Pro | Cys | Arg |
| | | | Thr | Ala | Glu |
| | 130 | | 135 | | 140 |

<210> 5747

<211> 1999

<212> DNA

<213> Homo sapiens

<400> 5747

```

nccatggccc agtccggcgg ggaggctcgg cccgggccc agacggcggg gcagatccgc
60
gtcgccatcc aggaggccga ggacgtggac gagttggagg acgaggagga gggggcggag
120
actcggggcg ccggggaccc ggcccgttac ctcagccccg gctggggcag cgcgagcgag
180
gaggagccga gccgcgggca cagtggcacc actgcaagtg gaggtgagaa cgagcgtgag
240
gacctggagc aggagtggaa gcccccgat gaggagttga tcaagaaact ggtggatcag
300
atcgaattct acttttctga tgaaaacctg gagaaggacg cttttttgct aaaacacgtg
360
aggaggaaca agctgggata tgtgagcgtt aagctactca catccttcaa aaaggtgaaa
420
catcttacac gggactggag aaccacagca catgctttga agtattcagt ggtccttgag
480
ttgaatgagg accaccggaa ggtgaggagg accacccccg tcccactgtt cccaacgag
540
aacctcccca gcaagatgct cctggtctat gatctctact tgtctcctaa gctgtgggct
600
ctggccaccc ccagaagaa tggaagggtg caagagaagg tgatggaaca cctgctcaag
660
cttttcggga cttttggagt catctcatca gtgcggatcc tcaaacctgg gagagagctg
720
ccccctgaca tccggaggat cagcagccgc tacagccaag tggggaccca ggagtgtgcc
780
atcgtggagt tccaggagggt ggaagcagcc atcaaagccc atgagttcat gatcacagaa
840
tctcagggca aagagaacat gaaagctgtc ctgattggta tgaagccacc caaaaagaaa
900
cctgccaaag acaaaaatca tgacgaggag cccactgcga gcatccacct gaacaagtcc
960
ctgaacaaga gagtcgagga gcttcagtac atgggtgatg agtcttctgc caacagctcc
1020
tctgaccccc agagcaaccc cacatcccct atggcggggc gacggcacgc ggccaccaac
1080
aagctcagcc cgtctggcca ccagaatctc tttctgagtc caaatgcctc cccgtgcaca
1140
agtccttgga gcagcccctt ggcccaacgc aaaggcgttt ccagaaagtc cccactggcg
1200
gaggaaggta gactgaactg cagcaccagc cctgagatct tccgcaagtg tatggattat
1260

```

tcctctgaca gcagcgtcac tccctctggc agcccctggg tccggaggcg tcgccaagcc
 1320
 gagatgggga cccaggagaa aagccccggt acgagtcccc tgctctcccg gaagatgcag
 1380
 actgcagatg ggctaccctg aggggtgctg aggttgccca ggggtcctga caacaccaga
 1440
 ggatttcatg gccatgagag gacgagggcc tgtgtataaa taccttctat ttttaataca
 1500
 agctccactg aaaaccacct tcgttttcaa ggttctgaca aacacctggc atgacagaat
 1560
 ggaattcggt cccctttgag agatttttta ttcattgtaga cctcttaatt tatctatctg
 1620
 taatatacat aaatcggtac gccatgggtt gaagaccacc ttctagttca ggactcctgt
 1680
 tcttcccagc atggccacta ttttgatgat ggctgatgtg tgtgagtgtg atggccctga
 1740
 agggctgtag gacggagggt cccctggggga agtctgttct ttggtatgga atttttctct
 1800
 cttctttggt atggaatttt tcccttcagt gactgagctg tcctcgatag gccatgcaag
 1860
 ggcttctga gagttcagga aagttctctt gtgcaacagc aagtagctaa gcctatagca
 1920
 tgggtgtctg taggaccaa tcatgtttac ctgtcaagta aataaataat aaaacaccca
 1980
 aaaaaaaaaa aaaaaaaaaa
 1999

<210> 5748

<211> 492

<212> PRT

<213> Homo sapiens

<400> 5748

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Met | Ala | Gln | Ser | Gly | Gly | Glu | Ala | Arg | Pro | Gly | Pro | Lys | Thr | Ala |
| 1 | | | 5 | | | | | 10 | | | | | 15 | | |
| Val | Gln | Ile | Arg | Val | Ala | Ile | Gln | Glu | Ala | Glu | Asp | Val | Asp | Glu | Leu |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| Glu | Asp | Glu | Glu | Glu | Gly | Ala | Glu | Thr | Arg | Gly | Ala | Gly | Asp | Pro | Ala |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Arg | Tyr | Leu | Ser | Pro | Gly | Trp | Gly | Ser | Ala | Ser | Glu | Glu | Glu | Pro | Ser |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Arg | Gly | His | Ser | Gly | Thr | Thr | Ala | Ser | Gly | Gly | Glu | Asn | Glu | Arg | Glu |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Asp | Leu | Glu | Gln | Glu | Trp | Lys | Pro | Pro | Asp | Glu | Glu | Leu | Ile | Lys | Lys |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Leu | Val | Asp | Gln | Ile | Glu | Phe | Tyr | Phe | Ser | Asp | Glu | Asn | Leu | Glu | Lys |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Asp | Ala | Phe | Leu | Leu | Lys | His | Val | Arg | Arg | Asn | Lys | Leu | Gly | Tyr | Val |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Ser | Val | Lys | Leu | Leu | Thr | Ser | Phe | Lys | Lys | Val | Lys | His | Leu | Thr | Arg |
| | | | 130 | | | 135 | | | | | 140 | | | | |
| Asp | Trp | Arg | Thr | Thr | Ala | His | Ala | Leu | Lys | Tyr | Ser | Val | Val | Leu | Glu |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Leu | Asn | Glu | Asp | His | Arg | Lys | Val | Arg | Arg | Thr | Thr | Pro | Val | Pro | Leu |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|-----|-----|--|--|--|
| 165 | | | | | | | | | | | | | | | | 170 | | | | 175 | | | | |
| Phe | Pro | Asn | Glu | Asn | Leu | Pro | Ser | Lys | Met | Leu | Leu | Val | Tyr | Asp | Leu | | | | | | | | | |
| 180 | | | | | | | | | | | | | | | | 185 | | | | 190 | | | | |
| Tyr | Leu | Ser | Pro | Lys | Leu | Trp | Ala | Leu | Ala | Thr | Pro | Gln | Lys | Asn | Gly | | | | | | | | | |
| 195 | | | | | | | | | | | | | | | | 200 | | | | 205 | | | | |
| Arg | Val | Gln | Glu | Lys | Val | Met | Glu | His | Leu | Leu | Lys | Leu | Phe | Gly | Thr | | | | | | | | | |
| 210 | | | | | | | | | | | | | | | | 215 | | | | 220 | | | | |
| Phe | Gly | Val | Ile | Ser | Ser | Val | Arg | Ile | Leu | Lys | Pro | Gly | Arg | Glu | Leu | | | | | | | | | |
| 225 | 230 | | | | | | | | | | | | | | | | 235 | | | | 240 | | | |
| Pro | Pro | Asp | Ile | Arg | Arg | Ile | Ser | Ser | Arg | Tyr | Ser | Gln | Val | Gly | Thr | | | | | | | | | |
| 245 | | | | | | | | | | | | | | | | 250 | | | | 255 | | | | |
| Gln | Glu | Cys | Ala | Ile | Val | Glu | Phe | Glu | Glu | Val | Glu | Ala | Ala | Ile | Lys | | | | | | | | | |
| 260 | | | | | | | | | | | | | | | | 265 | | | | 270 | | | | |
| Ala | His | Glu | Phe | Met | Ile | Thr | Glu | Ser | Gln | Gly | Lys | Glu | Asn | Met | Lys | | | | | | | | | |
| 275 | | | | | | | | | | | | | | | | 280 | | | | 285 | | | | |
| Ala | Val | Leu | Ile | Gly | Met | Lys | Pro | Pro | Lys | Lys | Lys | Pro | Ala | Lys | Asp | | | | | | | | | |
| 290 | | | | | | | | | | | | | | | | 295 | | | | 300 | | | | |
| Lys | Asn | His | Asp | Glu | Glu | Pro | Thr | Ala | Ser | Ile | His | Leu | Asn | Lys | Ser | | | | | | | | | |
| 305 | 310 | | | | | | | | | | | | | | | | 315 | | | | 320 | | | |
| Leu | Asn | Lys | Arg | Val | Glu | Glu | Leu | Gln | Tyr | Met | Gly | Asp | Glu | Ser | Ser | | | | | | | | | |
| 325 | | | | | | | | | | | | | | | | 330 | | | | 335 | | | | |
| Ala | Asn | Ser | Ser | Ser | Asp | Pro | Glu | Ser | Asn | Pro | Thr | Ser | Pro | Met | Ala | | | | | | | | | |
| 340 | | | | | | | | | | | | | | | | 345 | | | | 350 | | | | |
| Gly | Arg | Arg | His | Ala | Ala | Thr | Asn | Lys | Leu | Ser | Pro | Ser | Gly | His | Gln | | | | | | | | | |
| 355 | | | | | | | | | | | | | | | | 360 | | | | 365 | | | | |
| Asn | Leu | Phe | Leu | Ser | Pro | Asn | Ala | Ser | Pro | Cys | Thr | Ser | Pro | Trp | Ser | | | | | | | | | |
| 370 | | | | | | | | | | | | | | | | 375 | | | | 380 | | | | |
| Ser | Pro | Leu | Ala | Gln | Arg | Lys | Gly | Val | Ser | Arg | Lys | Ser | Pro | Leu | Ala | | | | | | | | | |
| 385 | 390 | | | | | | | | | | | | | | | | 395 | | | | 400 | | | |
| Glu | Glu | Gly | Arg | Leu | Asn | Cys | Ser | Thr | Ser | Pro | Glu | Ile | Phe | Arg | Lys | | | | | | | | | |
| 405 | | | | | | | | | | | | | | | | 410 | | | | 415 | | | | |
| Cys | Met | Asp | Tyr | Ser | Ser | Asp | Ser | Ser | Val | Thr | Pro | Ser | Gly | Ser | Pro | | | | | | | | | |
| 420 | | | | | | | | | | | | | | | | 425 | | | | 430 | | | | |
| Trp | Val | Arg | Arg | Arg | Arg | Gln | Ala | Glu | Met | Gly | Thr | Gln | Glu | Lys | Ser | | | | | | | | | |
| 435 | | | | | | | | | | | | | | | | 440 | | | | 445 | | | | |
| Pro | Gly | Thr | Ser | Pro | Leu | Leu | Ser | Arg | Lys | Met | Gln | Thr | Ala | Asp | Gly | | | | | | | | | |
| 450 | | | | | | | | | | | | | | | | 455 | | | | 460 | | | | |
| Leu | Pro | Val | Gly | Val | Leu | Arg | Leu | Pro | Arg | Gly | Pro | Asp | Asn | Thr | Arg | | | | | | | | | |
| 465 | 470 | | | | | | | | | | | | | | | | 475 | | | | 480 | | | |
| Gly | Phe | His | Gly | His | Glu | Arg | Ser | Arg | Ala | Cys | Val | | | | | | | | | | | | | |
| 485 | | | | | | | | | | | | | | | | 490 | | | | | | | | |

```
<210> 5749
<211> 2849
<212> DNA
<213> Homo sapiens
```

```
<400> 5749
gggtgagacg gtgggttgta tggagagaat gtgactgtac atttttataa gcaggactaa
60
cccaggaaaag aggaaaaaat acatttaaca gtgaagaggc aacacagagc tccctattgt
120
gaaataaaaac ccatttcaaa agttattgga aagaaaagtaa ggtatggctc ttatgggtta
180
```

actagtggta gtcagtttct gctttttact ccctctgaat tattaattgt ttgccagggt
240
cactggtggg aggctgagcc ggtggaaaag acaccgggaa gagactcaga ggcgaccata
300
atgtcgttac gtgtacacac tctgcccacc ctgcttggag ccgtcgtcag accgggctgc
360
agggagctgc tgtgtttgct gatgatcaca gtgactgtgg gccctgggtgc ctctgggggtg
420
tgccccaccg cttgcatctg tgccactgac atcgtcagct gcaccaacaa aaacctgtcc
480
aaggtgcctg ggaacctttt cagactgatt aagagactgg acctgagtta taacagaatt
540
gggcttcttg attctgagtg gattccagta tcgtttgcaa agctgaacac cctaattctt
600
cgtcataaca acatcaccag catttccacg ggcagttttt ccacaactcc aaatttgaag
660
tgtcttgact tatcgtccaa taagctgaag acggtgaaaa atgctgtatt ccaagagttg
720
aaggttcttg aagtgttct gctttacaac aatcacatat cctatctcga tccttcagcg
780
tttgaggggc tctcccagtt gcagaaactc tacttaagtg gaaattttct cacacagttt
840
ccgatggatt tgtatgttgg aaggttcaag ctggcagaac tgatgttttt agatgtttct
900
tataaccgaa ttccttccat gccaatgcac cacataaatt tagtgccagg aaaacagctg
960
agaggcatct accttcatgg aaacccattt gtctgtgact gttccctgta ctccctgctg
1020
gtcttttgg atcgtaggca ctttagctca gtgatggatt ttaagaacga ttacacctgt
1080
cgctgtgggt ctgactccag gcactcgcgt cagggtacttc tgctccagga tagctttatg
1140
aattgctctg acagcatcat caatggttcc tttcgtgcgc ttggctttat tcatgaggct
1200
caggtcgggg aaagactgat ggtccactgt gacagcaaga caggtaatgc aaatacggat
1260
ttcatctggg tgggtccaga taacagactg ctagagccgg ataaagagat ggaaaaacttt
1320
tacgtgtttc acaatggaag tctggttata gaaagccctc gttttgagga tgctggagtg
1380
tattcttgta tcgcaatgaa taagcaacgc ctgttaaagt aaactgtgga cgtcacaata
1440
aatgtgagca atttactgt aagcagatcc catgctcatg aggcatttaa cacagctttt
1500
accactcttg ctgcttgctg ggccagtatc gttttggtac ttttgtacct ctatctgact
1560
ccatgcccct gcaagtgtaa aaccaagaga cagaaaaata tgctacacca aagcaatgcc
1620
cattcatcga ttctcagtcc tggccccgct agtgatgcct ccgctgatga acggaaggca
1680
ggtgcaggta aaagagtggg gtttttggaa cccctgaagg atactgcagc agggcagaac
1740
gggaaagtca ggctctttcc cagcgaggca gtgatagctg agggcatcct aaagtccacg
1800

aggggggaaat ctgactcaga ttcagtcfaat tcagtgtttt ctgacacacc ttttgtggcg
 1860
 tccacttaat ttgtgcctat atttgtatga tgtcataatt taatctgttc atatttaact
 1920
 ttgtgtgtgg tctgcaaaat aaacagcagg acagaaattg tgttgttttg ttctttgaaa
 1980
 tacaacaaaa ttctcttaaa atgattggta ggaaatgagg taaagtactt cagttcctca
 2040
 atgtgccata gaaagatggg gttgttttcc aaagttaaag ttctagatca caatatctta
 2100
 gcttttagca ctattggtaa tttcagagta ggcccaaagg tgatatgact cccattgtcc
 2160
 ctttatttag gatattgaaa gaaaaaataa actttatgta ttagtgtcct ttaaaaaatag
 2220
 actttgctaa cttactagta ccagagttat tttaaagaaa aacactagtg tccaatttca
 2280
 tttttaaaag atgtagaaag aagaatcaag catcaattaa ttataaagcc taaagcaaag
 2340
 ttagatttgg gggttattca gccaaaatta ccgttttaga ccagaatgaa tagactacac
 2400
 tgataaaatg tactggataa tgccacatcc tatatgggtg tatagaaata gtgcaaggaa
 2460
 agtacatttg ttgacctgtc ttttcatttt gtacattctt cccattctgt attcttgtac
 2520
 aaaagatctc attgaaaatt taaagtcac ataatttggt gccataaata tgtaagtgtc
 2580
 aatacaaaaa tgtctgagta acttcttaaa tccctgttct agcaaactaa tattgggtca
 2640
 tgtgcttgtg tatatgtaaa tcttaaatta tgtgaactat taaatagacc ctactgtact
 2700
 gtgctttgga catttgaatt aatgtaaata tatgtaatct gtgacttgat attttgtttt
 2760
 atttggctat ttaaaaacat aaatctaaaa tgtcttatgt tatcagatta tgctattttg
 2820
 tataaagcac cactgatagc aaaaaaaaaa
 2849

<210> 5750

<211> 522

<212> PRT

<213> Homo sapiens

<400> 5750

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Leu | Arg | Val | His | Thr | Leu | Pro | Thr | Leu | Leu | Gly | Ala | Val | Val |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Arg | Pro | Gly | Cys | Arg | Glu | Leu | Leu | Cys | Leu | Leu | Met | Ile | Thr | Val | Thr |
| | | 20 | | | | | | 25 | | | | 30 | | | |
| Val | Gly | Pro | Gly | Ala | Ser | Gly | Val | Cys | Pro | Thr | Ala | Cys | Ile | Cys | Ala |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Thr | Asp | Ile | Val | Ser | Cys | Thr | Asn | Lys | Asn | Leu | Ser | Lys | Val | Pro | Gly |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Asn | Leu | Phe | Arg | Leu | Ile | Lys | Arg | Leu | Asp | Leu | Ser | Tyr | Asn | Arg | Ile |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Gly | Leu | Leu | Asp | Ser | Glu | Trp | Ile | Pro | Val | Ser | Phe | Ala | Lys | Leu | Asn |

4910

515

520

<210> 5751

<211> 926

<212> DNA

<213> Homo sapiens

<400> 5751

```

ngcgggcatg gccaggcggg gtggcctcgg gccggggcag aggcctggct ccgctgcctg
60
acctggaaca gtctctgcct ctctccaagc ctcggtttcc ccagctggac ggtgatgggg
120
gtgagggcta gctgagggct ctctgccct tcgtgcattc gctggtcact aatcgggcac
180
cttgtgggtg ctgtgctccg catgggggac ccagtgggtga cagagacgcc caccctcctg
240
gggctcccag agcagaggcg cgcagcagtt agacacgtga acaagggcgc aggcacccctg
300
gagatccgct ctgtacacgt gggcgctcgtg gtcaccaaag cagtgtcctc aggcttctac
360
gtggccatga accgccgggg ccgcctctac gggtcgacgac tctacaccgt ggactgcagg
420
ttccgggagc gcatcgaaga gaacggccac aacacctacg cctcacagcg ctggcgccgc
480
cgcgggccagc ccatgttcct ggcgctggac aggagggggg ggccccggcc aggcggccgg
540
acgcggcggt accacctgtc cgcccacttc ctgcccgtcc tggctcctctg aggccttgag
600
aggccggcgg ctccccaagg tgcttgggct ggtggcgagg ggcccggcca cgcttgttct
660
tccccctgcg ggctctgtaa gcgctgagtg cccaccgtgt gcgggcgctg tggacacagc
720
ccaggagccc tccagggggg tcccagcctg agggggtggt ggccaccaag caggttcaat
780
cctgagttgg ggacctcgag gacccaacag ggcgcctctc gggctgaagg acgcagacgt
840
cgaaaggtcg agggggacgt cccaggcagg gcccggcaga ggcaggggct cggggggggg
900
agcacgttgg gagtgggggc aggagc
926

```

<210> 5752

<211> 129

<212> PRT

<213> Homo sapiens

<400> 5752

```

Met Gly Asp Pro Val Val Thr Glu Thr Pro Thr Leu Leu Gly Leu Pro
1           5           10           15
Glu Gln Arg Arg Ala Ala Val Arg His Val Asn Lys Gly Ala Gly Ile
20           25           30
Leu Glu Ile Arg Ser Val His Val Gly Val Val Val Ile Lys Ala Val
35           40           45
Ser Ser Gly Phe Tyr Val Ala Met Asn Arg Arg Gly Arg Leu Tyr Gly

```


| | | |
|---|-----|-----|
| 50 | 55 | 60 |
| Ser Arg Leu Tyr Thr Val Asp Cys Arg Phe Arg Glu Arg Ile Glu Glu | | |
| 65 | 70 | 75 |
| Asn Gly His Asn Thr Tyr Ala Ser Gln Arg Trp Arg Arg Arg Gly Gln | | 80 |
| | 85 | 90 |
| Pro Met Phe Leu Ala Leu Asp Arg Arg Gly Gly Pro Arg Pro Gly Gly | | 95 |
| | 100 | 105 |
| Arg Thr Arg Arg Tyr His Leu Ser Ala His Phe Leu Pro Val Leu Val | | 110 |
| | 115 | 120 |
| | | 125 |
| Ser | | |

<210> 5753

<211> 5668

<212> DNA

<213> Homo sapiens

<400> 5753

```

nnaccggtac tttgtcttgg ataacagtgt catcctggca atgctggaac aacctcttgg
60
aaatgagcag aatgattttt tcccctctgt cactgtgctg gtccggggaa tgtctggaag
120
acttgcttgg gcacaacagc tttgtctttt acccagagga gcaaaaagcaa atcagaagct
180
ttttgtacct gaacctcgcc cagttcctaa aatgacgttg gatttaaata ttctgtgaaa
240
catcgcccat ttcctgaaga ggtggacaag attccttttg tgaaagcaga tctcagcatt
300
ccagatttgc atgaaatagt cactgaagaa ttagaagaga gacacgaaaa attaaggagt
360
ggcatggccc agcagattgc ttatgaaata caccttgagc aacagagtga ggaggaattg
420
cagaagagaa gttttcctga cccagttacg gattgcaagc ccccgctcc tgcccaggaa
480
ttccaaacag cccgcctttt tctctcacac tttggatttt tgtccttaga agcactgaag
540
gaacctgcaa atagtcgtct acctcctcac cttattgcac ttgattccac gataacctgga
600
ttttttgatg acattgggta tctggatctc ttgccatgtc gtccctttga cacagttttt
660
attttctata tgaagccagg tcagaaaacg aaccaagaga ttttaaagaa tgtggagtct
720
tccagaactg ttcagccaca tttcctagaa tttttgcttt cccttggtg gtcagtagat
780
gtgggcagac accctgggtg gactgggcat gtttctacca gttggtctat taattgttgt
840
gatgatggtg aaggatctca acaagaagaa gtgatttcct ctgaagatat tggagctagc
900
attttcaatg gacagaagaa ggtgctgtat tatgctgatg cccttacaga aattgctttt
960
gtggttcctt ctctgtgga gtccttaact gattcattgg aaagtaacat ctcggaacaa
1020
gatagtgatt caaatatgga tcttatgcca ggaattctga aacagccatc cctgacactt
1080

```

gagctttttcc ccaatcatac agacaatctt aattcctcac agaggctcag tcccagttcc
 1140
 agaatgagga agctgcctca gggctgcctt gttcctcccc ttggacctga gacaagagtt
 1200
 tctgtagtct ggggtggaacg ctatgatgat atagaaaact tccccctctc agagctgatg
 1260
 acagagatca gtactgggtgt ggaaactact gcaaatagta gcacttcact gagatctaca
 1320
 actcttgaaa aagaagttcc tgtcatcttc atccaccctt taaacactgg attattccgg
 1380
 ataaaaattc aaggagccac tggaaaattt aatatgggtca tccctcttgt ggatgggatg
 1440
 attgtcagca ggcgagctct tggctttctg gtgaggcaga ctgtaattaa catttgtaga
 1500
 agaaagagac tggaaagtga ctctacagt ccccccatg tccgccggaa acagaaaatc
 1560
 accgacattg tcaacaagta ccggaacaag cagctggagc cagagtttta tacttcactt
 1620
 ttccaggagg ttggactcaa gaactgcagt tcttagacca ctgaatttct aagactgttg
 1680
 aactccagtt tgggaactat aacacagcag aacagtttga taggtgatca ctgtaaaaat
 1740
 aaaaacaaat cactcccaag agcttactgt ttaatcacca gaatagaaga aacacattat
 1800
 aaccatttg atagaagact ttgggctatc tagtgaaatg ggctcccaga cacaatcata
 1860
 ctctgtctga taatgatgat atacatttta gccataaact ttcttttaaa agtgacaatt
 1920
 ttagttaaac ataagccttt tgaggagaaa ggcttttatg catctcagtt aaacacgtgc
 1980
 attggtagta tcaacaaatt tgcaatatag aagttgaaga tagtttttta cctcactttt
 2040
 taggagggtt tattcaaaat taaaatctca gaatcttaca ggacatttaa agactcatgt
 2100
 tgatagcatg gaggagaagg aaagaagtca cagccttcta ctcagttgta ggtcttcttg
 2160
 tcatccagct gtcacactga caaaaagaaa agatgatata tgttttttgc tcagataaga
 2220
 agcctgacat taaaagatgt catatttttt tctccacatt tcaaaaagtt gtccttctca
 2280
 tcaactgcaca gatctgtctg aaagcctcag tttctgagtg acccaggaac agatcagaaa
 2340
 tggagcatgg ccttgtcctt taatggggat gcaaataaag tttgtggggg taaaagttat
 2400
 aagacagcag tgatacccca ctctctccat tattgtccag cggggtgaca taatgacagg
 2460
 ttaaatattt gtgattcatt gattaaatat tatttaaaga aatgtaaatt cacaataagg
 2520
 gttgaaaatt atttggtttc atccattgtc tcttatttca ggaccaagca gcaaactgca
 2580
 gtagtttgtg aaggattcta atatgggggt caggaatagc ctctcaacgc tactaattca
 2640
 gatctctccc agagaactac tggatttcct cataattgac aaacatgagt gaccacctct
 2700

ttgggtggct actgttagaa atggctgttg tcatgttttc tggactttgc cagccaacag
2760
atccctgcc a ggttttgaa atacttctat tacctcgctg ctacttttct gcagggataa
2820
aacttttgag gtggccagac ccagaacatc caaggattcc tgttacagtg ctacagtata
2880
cactgctcat ttatcctatt ctcatgtgct ttcttcttta gtaagattat ttttaagaaa
2940
taagtgatat ttaaagtcca aagaggaatg atcacagttg tataaggggt gttttccac
3000
ttgaactctg atgtcagtcg actgtgggtc agagctacaa ccatctgttt ggtttgatgt
3060
tttggtggtt tacttacgga gtggggatag tgtgagacct aattccctgt gcaaatgtct
3120
cttattccag aaatgtgcat ttgtcatct ataagcaaga aatatgggca tagcagctct
3180
tggtttaaag ttggcataa cctgttcatg ttgttttaa gctcaggtaa agataacctc
3240
ctctttctat gactccagtt tccattcagg ttatagtatt attcaatagt tgattttctt
3300
tttaagctgg gcaataaatt gatgtttcca gatggtaaca tgggagaggg catataggat
3360
aaagatgagc aaattctacc ctaaaaatgt tctagtagtt cacaggaaga agatgaggtt
3420
taataacttt caaggtaatt ctagattgac attttgaggg gaaaatgggc tcttgttcta
3480
gttgaagtga gcagagaagg ctataaatta atatgtaact tacagcattc cagagggtta
3540
aaataactga tgcagatgta cttcttcagt gtgattcttc agatcaaact tttacttttg
3600
gcatagttaa tttcagaaaa atgtgctgta tgtgtgtgtg tatgaggggt ggtcttgctg
3660
atccttcagt tagctctaaa ttctggcaac tccttgtaat tccaatgtat ttgatacatg
3720
aacaatcatg ttgaatgcat ttgtgatctg ggagacttcc tcgtcttcca gggaaggaag
3780
gatgtgcagc ccctgaaggc atgaaactcc cagtgtgtac ggagccagtg gaatatggga
3840
taccataacc ttaccaggcg ctggttcctt ctgctcacia taacatctgc ccaaagaggg
3900
agtgggaaga acgcttagct ctttcactag tatggatttg agttcatggg cactattttt
3960
accacctgc ctttggttaa aatcactttg agtagaatag cactggagga acatatttag
4020
cacctaatat taatatttag tagtccattg ataaatttgc cagcatatgt tctagcctct
4080
ggggggaaac caggaccact tttgtctgtg gcttaaacag ttcagttgct atatctgttg
4140
ggtatgccg ggttgatga gtgtggcatt ccgtgaagag gaagggtgta agtaagggtt
4200
cccttctact gccttcttaa gttgcaggag ggagcttttc tcctccctc tggttgggag
4260
cactgaggac agtgaggagg gcttttacct tgtaatcct ttccttattt agctagcttt
4320

cctttttgtc tagggcttcc tcttgagacc ctcttccatc cattgggcct ttgaaaggac
4380
taatcagaca cacacacaca cacacacaca cacacacaca cacactcgca tactcatgca
4440
cattttcctt catttccaga tcctttatct cagagcagcc cattttcctc tggattcatt
4500
gatgaatata agtaccacaca cctttggcca gtaatgtcag ttacctgctg caggttctgt
4560
gtatgaggcc ttcatagaac gttaccttct ccatacacta gggaagcatt tgtcagactc
4620
tgcagactgg gttctagaga ggcagagtct ttaagagtat tcatttcttc tggaagggtg
4680
agctttaccc aaagtgggaag ttagccttgc tcaaagatgt gttttgtggg aggtggtaaa
4740
aataaataaa taaataaata ataaaaaag aaacatgtat tggaggtaat ttgacactgc
4800
tgctggcagt agttctctat tcaccatttt aaagccatt caggttctct cttcctgaaa
4860
agaactgatt gctgtgttta catgaaatga cattggagtc agatggtctg ttttaaagat
4920
ttccatgaca gcctcttttc ctgagttgga gagattggag gtggtctatc cgtacgatgt
4980
ggaatcaaac ggtgggtttc ttagtagcta aagaagccat gtacttctag tgtgtttctc
5040
agaatatcaa ctcatgttct tcagatgctt ttcttttttt aatggtgagg gaaaaggat
5100
aatttgggat tccacagtgc cttgcatata gtaggcgcc agtaaatact tgttgaagca
5160
aaccaagttt cccaagtcct catctcttat agtgaccaag acatctttct cctctgaagg
5220
gcttggcagt tgtggctaaa aaataagcag tatcattatt tgcttgaaat catatataca
5280
gtttgtatga atttcagtat gttgccaaaga catgattttt tcttattgta tttctgttaa
5340
atatttctgg cactgaactg taaagtaaag gcaaagtgt aatatgaagg cgtgcccgta
5400
ccccttgcc cctgtgtttc atcttcgtcg gttagggaag aaggccaga ggttgtttg
5460
tatttatgcc gatcctttgt ccagaagaag cccatggaat attgaatgta atacatttag
5520
tcaattaaat ttttaaggaga ttcttatcta ataactttgt gtgtgctttt ggatacaggc
5580
tgaggcttta ctctacact ggtgctgtta atttaccct ttcaggggat gtctgctcgg
5640
ctttggtgc cctttataat ttagatct
5668

<210> 5754

<211> 221

<212> PRT

<213> Homo sapiens

<400> 5754

Asp Ser Leu Glu Ser Asn Ile Ser Asp Gln Asp Ser Asp Ser Asn Met

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| 1 | | | | | 5 | | | | | 10 | | | | | 15 | | | | |
| Asp | Leu | Met | Pro | Gly | Ile | Leu | Lys | Gln | Pro | Ser | Leu | Thr | Leu | Glu | Leu | | | | |
| | | | 20 | | | | | 25 | | | | | 30 | | | | | | |
| Phe | Pro | Asn | His | Thr | Asp | Asn | Leu | Asn | Ser | Ser | Gln | Arg | Leu | Ser | Pro | | | | |
| | | 35 | | | | | 40 | | | | 45 | | | | | | | | |
| Ser | Ser | Arg | Met | Arg | Lys | Leu | Pro | Gln | Gly | Arg | Pro | Val | Pro | Pro | Leu | | | | |
| | 50 | | | | 55 | | | | | | 60 | | | | | | | | |
| Gly | Pro | Glu | Thr | Arg | Val | Ser | Val | Val | Trp | Val | Glu | Arg | Tyr | Asp | Asp | | | | |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | | | | | |
| Ile | Glu | Asn | Phe | Pro | Leu | Ser | Glu | Leu | Met | Thr | Glu | Ile | Ser | Thr | Gly | | | | |
| | | | | 85 | | | | 90 | | | | | 95 | | | | | | |
| Val | Glu | Thr | Thr | Ala | Asn | Ser | Ser | Thr | Ser | Leu | Arg | Ser | Thr | Thr | Leu | | | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | | | |
| Glu | Lys | Glu | Val | Pro | Val | Ile | Phe | Ile | His | Pro | Leu | Asn | Thr | Gly | Leu | | | | |
| | | 115 | | | | | 120 | | | | 125 | | | | | | | | |
| Phe | Arg | Ile | Lys | Ile | Gln | Gly | Ala | Thr | Gly | Lys | Phe | Asn | Met | Val | Ile | | | | |
| | 130 | | | | | 135 | | | | 140 | | | | | | | | | |
| Pro | Leu | Val | Asp | Gly | Met | Ile | Val | Ser | Arg | Arg | Ala | Leu | Gly | Phe | Leu | | | | |
| 145 | | | | | 150 | | | | 155 | | | | | 160 | | | | | |
| Val | Arg | Gln | Thr | Val | Ile | Asn | Ile | Cys | Arg | Arg | Lys | Arg | Leu | Glu | Ser | | | | |
| | | | | 165 | | | | 170 | | | | | 175 | | | | | | |
| Asp | Ser | Tyr | Ser | Pro | Pro | His | Val | Arg | Arg | Lys | Gln | Lys | Ile | Thr | Asp | | | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | | | |
| Ile | Val | Asn | Lys | Tyr | Arg | Asn | Lys | Gln | Leu | Glu | Pro | Glu | Phe | Tyr | Thr | | | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | | | |
| Ser | Leu | Phe | Gln | Glu | Val | Gly | Leu | Lys | Asn | Cys | Ser | Ser | | | | | | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | | | |

```
<210> 5755
<211> 1513
<212> DNA
<213> Homo sapiens
```

```

<400> 5755
nnacgcgtga aggggaacct gtactgcgag gtgtgccccg aggaccggcc cctcatcgtg
60
cagttctgtg ccaatgacct ggaggtgttt gttcaggcgg ctctcctggc tcaggattac
120
tgtgacgcca ttgacctgaa cttgggctgc ccacagatga tagccaagag aggtcactat
180
ggcgcccttc tgcaggacga gtgggacctg ctccaaagaa tgattttgct ggcccacgag
240
aaactctctg ttctctgtcac gtgcaaaatc cgtgtcttcc cggagattga caagaccgtg
300
aggtacgccc agatgctgga gaaggccggc tgccagttgc tgacggtgca cggacgcacc
360
aaggagcaga agggggccct gtcggttgca gcgtcctggg agcatatcaa ggctgtgcgg
420
aaggctgtgg ccatccctgt gtttgctaac gggaacatcc agtgccctgca ggacgtggag
480
cgctgcctcc gggacacggg tgtgcagggc gtcatgagcg cagagggcaa cctgcacaac
540
cccgccctgt tcgaggggcg gagccctgcc gtgtgggagc tggccgagga gtatctggac
600

```

atcgtgcggg agcacccttg cccctgtcc tacgtccggg cccacctctt caagctgtgg
 660
 caccacacgc tgcaggtgca ccaggagctg cgagaggagc tggccaaggt gaagaccctg
 720
 gagggcatcg ctgctgtgag ccaggagctg aagctgcggt gtcaggagga gatatccagg
 780
 caggagggag cgaagccac cggcgacttg cccttcact ggatctgcca gccctacatc
 840
 cggccggggc ccaggggagg gagcaaggag aaggcaggtg cgcgagcaa gcgggccctg
 900
 gaggaagagg aggggtggcac ggaggtcctg tccaagaaca agcaaaagaa gcagctgagg
 960
 aacccccaca agaccttcga cccctctctg aagccaaaat atgcaaagtg tgaccagtgt
 1020
 ggaaacccaa agggcaacag atgtgtgttc agcctgtgcc gcggctgctg caagaagcga
 1080
 gcctccaaag agactgcaga ctgccaggt cacggattgc tttttaaac caaattggag
 1140
 aagtctctgg cctggaaaga ggcccagcct gagctgcagg agcctcagcc agcagcacct
 1200
 ggaacaccag gtggcttctc cgaagtcag ggcaagtccc tggcctgaag gccacaaacc
 1260
 cccacccccca ggactgctgc tggagcctgg acacgtccta cttaagaaaa tgccttttac
 1320
 tcagggaatc tcctgtact taatgtggaa agacacgccc atgtccccct tcggcccact
 1380
 ctgggggcct ggaaatgctg cagtggggag caggccccag gctggacctg cctgtctc
 1440
 agcacgcgtg tgcaaaagtg aacaataaat catttcaaag atgaaaaaaaa aaaaaaaaaa
 1500
 aaaaagtcga cgc
 1513

<210> 5756

<211> 415

<212> PRT

<213> Homo sapiens

<400> 5756

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Arg | Val | Lys | Gly | Asn | Leu | Tyr | Cys | Glu | Val | Cys | Pro | Glu | Asp | Arg |
| 1 | | | 5 | | | | | 10 | | | | | 15 | | |
| Pro | Leu | Ile | Val | Gln | Phe | Cys | Ala | Asn | Asp | Pro | Glu | Val | Phe | Val | Gln |
| | | 20 | | | | | 25 | | | | | 30 | | | |
| Ala | Ala | Leu | Leu | Ala | Gln | Asp | Tyr | Cys | Asp | Ala | Ile | Asp | Leu | Asn | Leu |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Gly | Cys | Pro | Gln | Met | Ile | Ala | Lys | Arg | Gly | His | Tyr | Gly | Ala | Phe | Leu |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Gln | Asp | Glu | Trp | Asp | Leu | Leu | Gln | Arg | Met | Ile | Leu | Leu | Ala | His | Glu |
| 65 | | | | 70 | | | | 75 | | | | | 80 | | |
| Lys | Leu | Ser | Val | Pro | Val | Thr | Cys | Lys | Ile | Arg | Val | Phe | Pro | Glu | Ile |
| | | | 85 | | | | 90 | | | | | | 95 | | |
| Asp | Lys | Thr | Val | Arg | Tyr | Ala | Gln | Met | Leu | Glu | Lys | Ala | Gly | Cys | Gln |
| | | 100 | | | | | 105 | | | | | 110 | | | |
| Leu | Leu | Thr | Val | His | Gly | Arg | Thr | Lys | Glu | Gln | Lys | Gly | Pro | Leu | Ser |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Gly | Ala | Ala | Ser | Trp | Glu | His | Ile | Lys | Ala | Val | Arg | Lys | Ala | Val | Ala | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Ile | Pro | Val | Phe | Ala | Asn | Gly | Asn | Ile | Gln | Cys | Leu | Gln | Asp | Val | Glu | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Arg | Cys | Leu | Arg | Asp | Thr | Gly | Val | Gln | Gly | Val | Met | Ser | Ala | Glu | Gly | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Asn | Leu | His | Asn | Pro | Ala | Leu | Phe | Glu | Gly | Arg | Ser | Pro | Ala | Val | Trp | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Glu | Leu | Ala | Glu | Glu | Tyr | Leu | Asp | Ile | Val | Arg | Glu | His | Pro | Cys | Pro | |
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Leu | Ser | Tyr | Val | Arg | Ala | His | Leu | Phe | Lys | Leu | Trp | His | His | Thr | Leu | |
| | 210 | | | | | 215 | | | | | 220 | | | | | |
| Gln | Val | His | Gln | Glu | Leu | Arg | Glu | Glu | Leu | Ala | Lys | Val | Lys | Thr | Leu | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | |
| Glu | Gly | Ile | Ala | Ala | Val | Ser | Gln | Glu | Leu | Lys | Leu | Arg | Cys | Gln | Glu | |
| | | | | 245 | | | | | 250 | | | | | 255 | | |
| Glu | Ile | Ser | Arg | Gln | Glu | Gly | Ala | Lys | Pro | Thr | Gly | Asp | Leu | Pro | Phe | |
| | | | 260 | | | | | 265 | | | | | 270 | | | |
| His | Trp | Ile | Cys | Gln | Pro | Tyr | Ile | Arg | Pro | Gly | Pro | Arg | Glu | Gly | Ser | |
| | | 275 | | | | | 280 | | | | | 285 | | | | |
| Lys | Glu | Lys | Ala | Gly | Ala | Arg | Ser | Lys | Arg | Ala | Leu | Glu | Glu | Glu | Glu | |
| | 290 | | | | | 295 | | | | | 300 | | | | | |
| Gly | Gly | Thr | Glu | Val | Leu | Ser | Lys | Asn | Lys | Gln | Lys | Lys | Gln | Leu | Arg | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | |
| Asn | Pro | His | Lys | Thr | Phe | Asp | Pro | Ser | Leu | Lys | Pro | Lys | Tyr | Ala | Lys | |
| | | | | 325 | | | | | 330 | | | | | 335 | | |
| Cys | Asp | Gln | Cys | Gly | Asn | Pro | Lys | Gly | Asn | Arg | Cys | Val | Phe | Ser | Leu | |
| | | | 340 | | | | | 345 | | | | | 350 | | | |
| Cys | Arg | Gly | Cys | Cys | Lys | Lys | Arg | Ala | Ser | Lys | Glu | Thr | Ala | Asp | Cys | |
| | | 355 | | | | | 360 | | | | | 365 | | | | |
| Pro | Gly | His | Gly | Leu | Leu | Phe | Lys | Thr | Lys | Leu | Glu | Lys | Ser | Leu | Ala | |
| | 370 | | | | | 375 | | | | | 380 | | | | | |
| Trp | Lys | Glu | Ala | Gln | Pro | Glu | Leu | Gln | Glu | Pro | Gln | Pro | Ala | Ala | Pro | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | |
| Gly | Thr | Pro | Gly | Gly | Phe | Ser | Glu | Val | Met | Gly | Ser | Ala | Leu | Ala | | |
| | | | | 405 | | | | | 410 | | | | | 415 | | |

<210> 5757

<211> 2362

<212> DNA

<213> Homo sapiens

<400> 5757

gagatcacca gcgtttgtag acagtagtgt ggcgcttgga gtttacctga gggccagtgg
 60

agctccaggg acctatcagg acggggacct gtggggactg ggaaggcctg tggggctgcg
120

tggagcccgg tactggaggc cgacgggggt gacggggacg ctgaggacac agagcggagg
180

ggcatgatgg ctgctggggc tggagggtgc gagagtgact gtgctggggc tgctccatcg
240

ttgtctgagc ctcccggtgc tgccgctgtg gccgtttctt tgatgaggct ctcagaggcc
300

gagtcattca ctgccagcct gaagctgccc atgcgcata tctgggctgga gcctctgagg
360
ccacacaaac gccggctggg gaggcgaagt gtggggctga gcaccagaac tccaggagcg
420
tctgggctgg agacagaact ggggtgggcag gtggggaggg cctgcagatc tgagtgggca
480
gccgaggagg aaccagaag acgccagcga tggagctctg ccggggcgga atgtggccag
540
gaggggctgg agcagtgcg gcctgtccg cgctagaact agggaccgtg ctctcaggac
600
ctctggatgt tcccagatat cctgatgttc caccagaag ccgccagggc catcctggag
660
taccgcatcc gcacgtgga cggggccctg gagaacgcc agaacctggg ctaccaggga
720
gccaaagttt cctgggagag tgcagactcc ggcctagagg tttgccctga ggacatttac
780
ggagtccagg aggtccacgt caacggggcc gtggtgttgg ccttcgagct gtactaccat
840
accacccagg acctgcagct atttcgagag ggtggtgggt gggagggtgt tagggctgtg
900
gcgaagtttt ggtgcagtcg tgttgagtgg agccccaggg aggaaaagta ccacctgagg
960
ggagtcatgt ccccgacga gtaccattca ggggtcaaca actctgtgta caccaacgtc
1020
ctggtccaga acagcctgcg ctttgctgct gccctggccc aggacctggg tcttcccatc
1080
cccagccagt ggctggcggg ggctgacaag atcaaggtag cctttgacgt ggagcagaac
1140
ttccacccgg agttcgatgg gtatgagcct ggagagggtg tgaagcaggc agacgtcgtg
1200
ctcctgggat acccagtcct cttctccctg agtcctgatg ttgcaggaa aaatctggag
1260
atttacgagg ctgtgacgtc cccccagggc ccgcacatga cctggagcat gtttgcgtg
1320
ggctggatgg agctgaagga cgcagtgcg gcccggggccc tctggacag gagctttgcc
1380
aacatggctg aacccttcaa ggtgtggacg gagaatgcag acgggtcagg cgtgtgaac
1440
ttcctgacag gcatgggggg cttcctgcag gcggtggtct tgggtgcac ggggttcagg
1500
gtcaccgag cgggtgtgac ctttgacct gtgtgtctgt cgggatctc cagagtgagc
1560
gtctccggca tcttctacca ggggaacaag ctcaacttct cttttccga ggactccgtg
1620
accgtggagg tcacagctcg agcagggcc tgggtcctc acctggaggc tgagctgtgg
1680
ccatcccagt cccggtctc cctgttgcca ggacacaagg tctcctttcc ccgtcggct
1740
ggccggatac aaatgtcacc cccgaagctg cctggaagtt ccagctccga gttccctggg
1800
aggacttttt cagatgttag ggacccgctc cagagcccc tctgggtcac cctgggttcc
1860
tccagcccca ccgagtcact cactgtggac cctgcctctg aataatcagg aacgggtggc
1920

tcagagacgt ctcttgggcc ttccctcttg ccacgtctgc acccaccct cctgggcacc
 1980
 ctcttagcct gccatccctc acctgcagcc aggtctctcag ggaaggtcca tgctgcttgg
 2040
 cctgagttca aggttttctg cctgtagcct ggactcccggt ggacccccgt gggcaggtgg
 2100
 cttccccgtg gcattctccac accgcctctg cctgccccctg tggactgatg ctatcgcgca
 2160
 cgggtcccacg accccacccc gagctcctga agccgggggtc tgagcctgca tcacctctgg
 2220
 cctctcatcc cccactctcc tgagagcagt ggtcacagcg gccggccgct ctgctgagaa
 2280
 ggcagagagg caggctcagg cctcagcgtg gacagcaggg ataaggggca cgaaggacgg
 2340
 ggactcggcc ccttcagaat tc
 2362

<210> 5758

<211> 440

<212> PRT

<213> Homo sapiens

<400> 5758

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Pro | Cys | Ser | Gln | Asp | Leu | Trp | Met | Phe | Pro | Ser | Ile | Leu | Met | Phe |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| His | Pro | Glu | Ala | Ala | Arg | Ala | Ile | Leu | Glu | Tyr | Arg | Ile | Arg | Thr | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asp | Gly | Ala | Leu | Glu | Asn | Ala | Gln | Asn | Leu | Gly | Tyr | Gln | Gly | Ala | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Phe | Ala | Trp | Glu | Ser | Ala | Asp | Ser | Gly | Leu | Glu | Val | Cys | Pro | Glu | Asp |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ile | Tyr | Gly | Val | Gln | Glu | Val | His | Val | Asn | Gly | Ala | Val | Val | Leu | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Phe | Glu | Leu | Tyr | Tyr | His | Thr | Thr | Gln | Asp | Leu | Gln | Leu | Phe | Arg | Glu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gly | Gly | Gly | Trp | Glu | Val | Val | Arg | Ala | Val | Ala | Lys | Phe | Trp | Cys | Ser |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Val | Glu | Trp | Ser | Pro | Arg | Glu | Glu | Lys | Tyr | His | Leu | Arg | Gly | Val |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Met | Ser | Pro | Asp | Glu | Tyr | His | Ser | Gly | Val | Asn | Asn | Ser | Val | Tyr | Thr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asn | Val | Leu | Val | Gln | Asn | Ser | Leu | Arg | Phe | Ala | Ala | Ala | Leu | Ala | Gln |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Asp | Leu | Gly | Leu | Pro | Ile | Pro | Ser | Gln | Trp | Leu | Ala | Val | Ala | Asp | Lys |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Ile | Lys | Val | Pro | Phe | Asp | Val | Glu | Gln | Asn | Phe | His | Pro | Glu | Phe | Asp |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Gly | Tyr | Glu | Pro | Gly | Glu | Val | Val | Lys | Gln | Ala | Asp | Val | Val | Leu | Leu |
| | 195 | | | | | 200 | | | | | | 205 | | | |
| Gly | Tyr | Pro | Val | Pro | Phe | Ser | Leu | Ser | Pro | Asp | Val | Arg | Arg | Lys | Asn |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Leu | Glu | Ile | Tyr | Glu | Ala | Val | Thr | Ser | Pro | Gln | Gly | Pro | Ala | Met | Thr |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | |
| Trp | Ser | Met | Phe | Ala | Val | Gly | Trp | Met | Glu | Leu | Lys | Asp | Ala | Val | Arg |

```
<210> 5759
<211> 1333
<212> DNA
<213> Homo sapiens
```

```

<400> 5759
cgcacgggcg cgcgccagtgt tgacgcgctt cttagctggt gcgcgccgga gcccaaattc
60
caagtggaaa ctgcaggcgc acgaggggagg aacgcgtgga gcatgaaaag gcagggggcc
120
tcctctgagc gaaaacgagc gcggtatccg tccgggaagg ccggagcagc aaatggattt
180
ctcatggaag tttgtgttga ttcagtggaa tcagctgtga atgcagaaag aggaggtgct
240
gatcggattg aattatgttc tggtttatca gaggggggaa ctacaccag catgggtgtc
300
cttcaagtag tgaagcagag tgttcagatc ccagtttttg tgatgattcg gccacgggga
360
ggtgattttt tgtattcaga tcgtgaaatt gaggtgatga aggctgacat tcgtcttgcc
420
aagctttatg gtgctgatgg tttggttttt ggggcattga ctgaagatgg acacattgac
480
aaagagctgt gtatgtccct tatggctatt tgccgccctc tgccagtcac tttccaccga
540
gcctttgaca tggttcatga tccaatggca gctctggaga ccctcttaac cttgggattt
600
gaacgcgtgt tgaccagtgg atgtgacagt tcagcattag aagggtacc cctaataaag
660

```

cgactcattg agcaggcaaa aggcaggatt gtggtaatgc caggaggtgg tataacagac
 720
 agaaatctac aaaggatcct tgaggggttca ggtgctacag aattccactg ttctgctcgg
 780
 tctactagag actcgggaat gaagtttcga aattcatctg ttgccatggg agcctcactt
 840
 tcttgctcag aatattccct aaaggtaaca gatgtgacca aagtaaggac tttgaatgct
 900
 atcgcaaaga acatcctggg gtagccagac ctctctgaga gacatggata tcacaggatg
 960
 aaggtagaac tataatctgc aattctctat gacacagctt taaccttctt ctctggccag
 1020
 gacagtgcga atctttgttt taagtttcac atggccatgg agaatgtgcc caagaagaaa
 1080
 aagaatttga aacagagata cagtcacttc ctttgcttag tcttaccagt gattgtcatc
 1140
 atggttaaag ctggtctgtg cttcttccat agacagaagc ttagtctgtt ttcagtggaa
 1200
 ttaattgatg aactgggaaa attttaactg catggtatga attcagagtg tgacttaagg
 1260
 gtcaattcaa agcagtatctt tgacttttca tttgtaaaat aaaaatttcc actattaaaa
 1320
 aaaaaaaaaaaa aaa
 1333

<210> 5760

<211> 273

<212> PRT

<213> Homo sapiens

<400> 5760

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Arg | Gln | Gly | Ala | Ser | Ser | Glu | Arg | Lys | Arg | Ala | Arg | Ile | Pro |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Ser | Gly | Lys | Ala | Gly | Ala | Ala | Asn | Gly | Phe | Leu | Met | Glu | Val | Cys | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asp | Ser | Val | Glu | Ser | Ala | Val | Asn | Ala | Glu | Arg | Gly | Gly | Ala | Asp | Arg |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ile | Glu | Leu | Cys | Ser | Gly | Leu | Ser | Glu | Gly | Gly | Thr | Thr | Pro | Ser | Met |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Val | Leu | Gln | Val | Val | Lys | Gln | Ser | Val | Gln | Ile | Pro | Val | Phe | Val |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Met | Ile | Arg | Pro | Arg | Gly | Gly | Asp | Phe | Leu | Tyr | Ser | Asp | Arg | Glu | Ile |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Glu | Val | Met | Lys | Ala | Asp | Ile | Arg | Leu | Ala | Lys | Leu | Tyr | Gly | Ala | Asp |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gly | Leu | Val | Phe | Gly | Ala | Leu | Thr | Glu | Asp | Gly | His | Ile | Asp | Lys | Glu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Leu | Cys | Met | Ser | Leu | Met | Ala | Ile | Cys | Arg | Pro | Leu | Pro | Val | Thr | Phe |
| | | 130 | | | | 135 | | | | | 140 | | | | |
| His | Arg | Ala | Phe | Asp | Met | Val | His | Asp | Pro | Met | Ala | Ala | Leu | Glu | Thr |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Leu | Leu | Thr | Leu | Gly | Phe | Glu | Arg | Val | Leu | Thr | Ser | Gly | Cys | Asp | Ser |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Ser | Ala | Leu | Glu | Gly | Leu | Pro | Leu | Ile | Lys | Arg | Leu | Ile | Glu | Gln | Ala |

```
<210> 5761
<211> 1452
<212> DNA
<213> Homo sapiens
```

<400> 5761
nnaccatctt aaggacagaa aagctacagg actctaggag gccaccgtcc tgatttggga
60
agtccaactt actttggcca gacagcagct aagctgggtc atcccatcag cctggattgg
120
tgaaactgaa tcacaggaga tatttccagg tttgctggga tgggaaacct gctcaaagtc
180
cttaccaggg aaattgaaaa ctatccacac tttttcctgg attttgaaaa tgctcagcct
240
acagaaggag agagagaaat ctggaaccag atcagcgccg tccttcagga ttctgagagc
300
atccttgagc acctgcaggc ttacaaaggc gcaggcccag agatccgaga tgcaattcaa
360
aatcccaatg acattcagct tcaagaaaaa gcttggaaat cggtgtgccc tcttgttgtg
420
aggctaaaga gattttacga gttttccatt agactagaaa aagctcttca gagttttattg
480
gaatctctga cttgtccacc ctacacacca acccaacacc tggaaaggga acaggccctg
540
gcaaaggagt ttgccgaaat tttacatttt acccttcgat tcgatgagct gaagatgagg
600
aaccgggcta ttcagaatga cttcagctac tacagaagaa caatcagtcg caaccgcac
660
aacaacatgc acctagacat tgagaatgaa gtcaataatg agatggccaa tcgaatgtcc
720
ctcttctatg cagaagccac gccaatgctg aaaaccctta gcaatgccac aatgcacttt
780
gtctctgaaa acaaaactct gccaatagag aacaccacag actgcctcag cacaatgaca
840
agtgtctgta aagtcattgt ggaaactccg gagtacagaa gtaggtttac gagtgaagag
900
accctgatgt tctgcatgag ggtgatggtg ggagtcattc tcctctatga ccatgtccac
960
cctgtgggag ctttctgcaa gacatccaag atcgatatga aaggctgcat aaaagttttg
1020

aaggagcagg cccagacag tgtggagggg ctgctaaatg ccctcagggt cactacaaag
1080
cacttgaacg atgaatcaac ttccaaacag attcgagcaa tgcttcagta gagctctgct
1140
caaagaagag gatctatgtg ctgacctcag aagatgtata tgtttacata atttaataca
1200
gattgatgtt aatacttgtg tatttacata accgtttcct tcttgtcact gaaatatatg
1260
gaccttaatt tgtatcctga ctgactcaac ccagcagagc ataaattgac ttgagagcct
1320
tacctttgat gtctgaaatg aaaccccctt ctccaaaggc aaaattcgga gactttgatc
1380
tttgctactg gagtccttta acaacaccta taacgataaa aaattcctaa ttgtttgtgg
1440
tagtaaaaaa aa
1452

<210> 5762

<211> 333

<212> PRT

<213> Homo sapiens

<400> 5762

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Thr | Gly | Asp | Ile | Ser | Arg | Phe | Ala | Gly | Met | Gly | Asn | Leu | Leu | Lys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Leu | Thr | Arg | Glu | Ile | Glu | Asn | Tyr | Pro | His | Phe | Phe | Leu | Asp | Phe |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Asn | Ala | Gln | Pro | Thr | Glu | Gly | Glu | Arg | Glu | Ile | Trp | Asn | Gln | Ile |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Ala | Val | Leu | Gln | Asp | Ser | Glu | Ser | Ile | Leu | Ala | Asp | Leu | Gln | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Tyr | Lys | Gly | Ala | Gly | Pro | Glu | Ile | Arg | Asp | Ala | Ile | Gln | Asn | Pro | Asn |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Asp | Ile | Gln | Leu | Gln | Glu | Lys | Ala | Trp | Asn | Ala | Val | Cys | Pro | Leu | Val |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Val | Arg | Leu | Lys | Arg | Phe | Tyr | Glu | Phe | Ser | Ile | Arg | Leu | Glu | Lys | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Gln | Ser | Leu | Leu | Glu | Ser | Leu | Thr | Cys | Pro | Pro | Tyr | Thr | Pro | Thr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gln | His | Leu | Glu | Arg | Glu | Gln | Ala | Leu | Ala | Lys | Glu | Phe | Ala | Glu | Ile |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Leu | His | Phe | Thr | Leu | Arg | Phe | Asp | Glu | Leu | Lys | Met | Arg | Asn | Pro | Ala |
| 145 | | | | | 150 | | | | 155 | | | | | 160 | |
| Ile | Gln | Asn | Asp | Phe | Ser | Tyr | Tyr | Arg | Arg | Thr | Ile | Ser | Arg | Asn | Arg |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Ile | Asn | Asn | Met | His | Leu | Asp | Ile | Glu | Asn | Glu | Val | Asn | Asn | Glu | Met |
| | | 180 | | | | | 185 | | | | | 190 | | | |
| Ala | Asn | Arg | Met | Ser | Leu | Phe | Tyr | Ala | Glu | Ala | Thr | Pro | Met | Leu | Lys |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Thr | Leu | Ser | Asn | Ala | Thr | Met | His | Phe | Val | Ser | Glu | Asn | Lys | Thr | Leu |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Pro | Ile | Glu | Asn | Thr | Thr | Asp | Cys | Leu | Ser | Thr | Met | Thr | Ser | Val | Cys |
| 225 | | | | | 230 | | | | 235 | | | | | 240 | |
| Lys | Val | Met | Leu | Glu | Thr | Pro | Glu | Tyr | Arg | Ser | Arg | Phe | Thr | Ser | Glu |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | 245 | | | | 250 | | | | | 255 | | |
| Glu | Thr | Leu | Met | Phe | Cys | Met | Arg | Val | Met | Val | Gly | Val | Ile | Ile | Leu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Tyr | Asp | His | Val | His | Pro | Val | Gly | Ala | Phe | Cys | Lys | Thr | Ser | Lys | Ile |
| | | | 275 | | | | 280 | | | | | 285 | | | |
| Asp | Met | Lys | Gly | Cys | Ile | Lys | Val | Leu | Lys | Glu | Gln | Ala | Pro | Asp | Ser |
| | | | 290 | | | 295 | | | | | 300 | | | | |
| Val | Glu | Gly | Leu | Leu | Asn | Ala | Leu | Arg | Phe | Thr | Lys | His | Leu | Asn | |
| 305 | | | | | 310 | | | | | 315 | | | | 320 | |
| Asp | Glu | Ser | Thr | Ser | Lys | Gln | Ile | Arg | Ala | Met | Leu | Gln | | | |
| | | | | 325 | | | | | 330 | | | | | | |

```
<210> 5763
<211> 3840
<212> DNA
<213> Homo sapiens
```

| | | | | | |
|------------|------------|------------|-------------|------------|-------------|
| <400> | 5763 | | | | |
| ntctctcccc | tccccaagat | ggcgtccttg | ctgcagtcgg | accgggttct | ctatctagtc |
| 60 | | | | | |
| cagggagaaa | agaaggttcg | ggccccgctc | tcgcaactct | acttctgccg | ctattgtagc |
| 120 | | | | | |
| gaactgcggt | cgctggaatg | tgtgtctcac | gaggtggact | cccattattg | tcccagttgt |
| 180 | | | | | |
| ttagaaaata | tgccatcggc | tgaagccaaa | ctaaaaaaga | atagatgtgc | caattgtttt |
| 240 | | | | | |
| gactgtcctg | gctgcatgca | cacctctctc | actcggggcca | cgagcatctc | cacacagctt |
| 300 | | | | | |
| ccagatgacc | cagccaagac | caccatgaag | aaagcctatt | acctggcatg | tggattttgt |
| 360 | | | | | |
| cgctggacgt | ctagagatgt | gggcatggca | gacaaatctg | tagctagtgg | cggttggcag |
| 420 | | | | | |
| gaacctgaaa | atcctcacac | acaacggatg | aacaaattga | ttgaatatta | ccagcagctt |
| 480 | | | | | |
| gctcagaaag | agaaggttga | gcgagatcgc | aagaaactgg | cacgacgtag | aaactatatg |
| 540 | | | | | |
| cctctggctt | tttcggacaa | atatggctct | ggaaccaggc | ttcagcgacc | acgagctggg |
| 600 | | | | | |
| gcatccatca | gtacccttgc | cggactttcc | cttaaagaag | gagaggatca | gaaagaggta |
| 660 | | | | | |
| aagattgagc | cagctcaggc | tgtggatgaa | gtggaacctc | tacctgaaga | ctattataca |
| 720 | | | | | |
| agaccagtaa | atttaacaga | ggtaacaacc | cttcagcagc | gtctgttaca | gcctgacttc |
| 780 | | | | | |
| cagccagtct | gtgcttcaca | gctctatcct | cgccacaaac | atcttctgat | caaacgggtcc |
| 840 | | | | | |
| ctgcgctgcc | gtaaatgtga | acataatttg | agcaagccag | aattttaacc | aacgtcaatc |
| 900 | | | | | |
| aaattcaaaa | tccagctggg | cgctgtcaat | tatattccag | aagtgagaat | catgtcaatt |
| 960 | | | | | |
| cccaaccttc | gctacatgaa | ggagagccag | gtcctcctga | ctcttacaaa | tccagttgag |
| 1020 | | | | | |
| aacctcacco | atgtgactct | cttcgagtgt | gaggaggggg | accctgatga | tatcaacagc |
| 1080 | | | | | |

actgctaagg tgggtggtgcc tcccaaagag ctcgtttttag ctggcaagga tgcagcagca
1140
gagtacgatg agttggcaga acctcaagac ttccaggacg atcctgacat tatagccttc
1200
agaaaggcca acaaagtggg tattttcatt aaagttacac cacagcgtga ggaggggtgaa
1260
gtgaccgtgt gcttcaagat gaagcatgat tttaaaaacc tggcagcccc cattcgcccc
1320
attgaagaaa gtgaccaggg aacagaagtc atctgggtca ccagcatgt ggaacttagc
1380
ttgggccccac ttcttcctta aaagggtcca ctggagggca gatcccaaag gacagtatca
1440
ccgtaaacct gcgttaaaat gtggaagctg ctgcttcatt aggcttgtt tataacgatg
1500
taccatgca ctacggaatt ctattgctaa gaaagtggga gcataggcaa ggcattggga
1560
acacagggtg gctgctgttg ctcttgctct caccctgtt gacaccagta agtctgtgtc
1620
tccctcactg aaccctgcac gttgagtaac agcagcataa ttccatcta ggaaagggga
1680
tgggtgttcc ttggaatggc attgtattta ccacctgaga aactctgtac tgtctcttga
1740
tctgatctca ctaaggatca caatgtcaca gatgaaactt aaatgataac ccaaaggtag
1800
acctgctgtt aatgatccag cattgggtcac aatgtaccaa ctgctttctg cattccgtta
1860
aatatcatct aacagtctaa aacatatccc ttcatgcca taatggctgc cattttgcca
1920
tagatttcca tataactgaa aaactgaatt gtcactttat ctttagtatt atgatgattg
1980
gaaaaaacctg tgaagttgtt aaggcactct catttgccct ctttttctaa gtgaatacag
2040
gacacgtatt agttgttctt aatttttttc ccagtaaaat atggatcttt taagaagaat
2100
ttgagaagca aacaattaca tgtcatgtca agggggtagc agattccatt cgttttcaat
2160
attgccacaa taccagggga ttaatgctgc cacagggggg caatctttat ttgtcttact
2220
tcctaccctt tcctgttctt gcctctttta ctcagttaag ttgttctgtt tgggacctgg
2280
aaaagaaccc aaagaaaacc tgagtggaca gggttcatttc tggaatgcag aaaacatttt
2340
aaaggctaga tttttagaat attctcaact agcattcttt ccattgattt gaaggggaaa
2400
ttaactatta taatctcttg aatccaaaac tggatattaa gaactttccc cttactaag
2460
tttaagactt ttgtcatgtg gtgagtcaaa taagaccatt ttgattgtaa accataaaat
2520
agttcagcaa gtagccca gttctggcct aacagcagac ttgctgtttt cacttggtat
2580
cctggagttg gggtgctaac cttaatttct atgatgtttt ctaaaatgaa acttgataaa
2640
gtagaccacc agctgcaccg tgttttctgt aaaagtattg ttagtaagtg gccaagagac
2700

ttgaggaaaa tacagatttt ttgtttacct tgggtcttggt ttaagtctta aaaaattaaa
 2760
 gataacatta taatgtagaa tacagatggg acatagtcct tgtaagcttc ccttgaaaat
 2820
 gttttaaata ttttaggaagc ttttaaaaga cactaaattg tactctaaaa gacactaaat
 2880
 tgtactaatt gtacaaaggt caagccaatt ttatgaaaca gtccctacaga gtaatatatg
 2940
 tgatgcagtg taagaaggaa aatactcatc tctaacatta tggtaataac atttagcctc
 3000
 ttaggagttg gagcaggggg atgggtaatt acagatttgc agactataga aagagtttca
 3060
 tttttttgtg accccacaga gtctcaaatt tttatttcac tacctgctag agcctactgt
 3120
 gaaatcactg ctccatattt gccagtggag gaaatgggca tagagtagag aatagcttca
 3180
 tatgtttaca cgtttgcata gactacacac atgtcatgcg tttatggcag gtagctggta
 3240
 tttattcccc aaagtaataa tgttgaagta tgggtctcat cattcccata cacagaaaca
 3300
 caaaacactt tgatcataaa cttttttctt cagaagccaa actaacttgc agaataatag
 3360
 agccactggg ttaatgtttc ctcaagatag gtttttagtgt aagctagtat tctgtgtgtt
 3420
 cgtagaaatg attcaatacc tgcagctggg gaattaggaa ttgtatttgt tgcctttttt
 3480
 atattagatg aggtgcaaaa attttaatgc tagtcagtat gcaccaccac aggaaagtta
 3540
 gatcccata gcaacttgaac ctacagcttt ggaaacttag gctaagttaa tttggatttg
 3600
 ttacttgatt cacctactga ctttttcttt tgtttgaagt gcttatcagc ataatgagct
 3660
 aagtgtcatg catatttgtg aagaaacacc ctttttggtc ctttttggga cagagaggta
 3720
 ctccctgatc tttatgaatg acaggttact gttttgcctt attgcttaac ttaatgtagt
 3780
 gaaataaagc agacaaagct tgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3840

<210> 5764

<211> 466

<212> PRT

<213> Homo sapiens

<400> 5764

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Pro | Pro | Leu | Pro | Lys | Met | Ala | Ser | Leu | Leu | Gln | Ser | Asp | Arg | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Tyr | Leu | Val | Gln | Gly | Glu | Lys | Lys | Val | Arg | Ala | Pro | Leu | Ser | Gln |
| | | | 20 | | | | | | 25 | | | | 30 | | |
| Leu | Tyr | Phe | Cys | Arg | Tyr | Cys | Ser | Glu | Leu | Arg | Ser | Leu | Glu | Cys | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | His | Glu | Val | Asp | Ser | His | Tyr | Cys | Pro | Ser | Cys | Leu | Glu | Asn | Met |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Pro | Ser | Ala | Glu | Ala | Lys | Leu | Lys | Lys | Asn | Arg | Cys | Ala | Asn | Cys | Phe |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Asp | Cys | Pro | Gly | Cys | Met | His | Thr | Leu | Ser | Thr | Arg | Ala | Thr | Ser | Ile |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ser | Thr | Gln | Leu | Pro | Asp | Asp | Pro | Ala | Lys | Thr | Thr | Met | Lys | Lys | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Tyr | Tyr | Leu | Ala | Cys | Gly | Phe | Cys | Arg | Trp | Thr | Ser | Arg | Asp | Val | Gly |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Met | Ala | Asp | Lys | Ser | Val | Ala | Ser | Gly | Gly | Trp | Gln | Glu | Pro | Glu | Asn |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Pro | His | Thr | Gln | Arg | Met | Asn | Lys | Leu | Ile | Glu | Tyr | Tyr | Gln | Gln | Leu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ala | Gln | Lys | Glu | Lys | Val | Glu | Arg | Asp | Arg | Lys | Lys | Leu | Ala | Arg | Arg |
| | | | | 165 | | | | 170 | | | | | | 175 | |
| Arg | Asn | Tyr | Met | Pro | Leu | Ala | Phe | Ser | Asp | Lys | Tyr | Gly | Leu | Gly | Thr |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Arg | Leu | Gln | Arg | Pro | Arg | Ala | Gly | Ala | Ser | Ile | Ser | Thr | Leu | Ala | Gly |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| Leu | Ser | Leu | Lys | Glu | Gly | Glu | Asp | Gln | Lys | Glu | Val | Lys | Ile | Glu | Pro |
| | 210 | | | | 215 | | | | | 220 | | | | | |
| Ala | Gln | Ala | Val | Asp | Glu | Val | Glu | Pro | Leu | Pro | Glu | Asp | Tyr | Tyr | Thr |
| 225 | | | | 230 | | | | 235 | | | | | | | 240 |
| Arg | Pro | Val | Asn | Leu | Thr | Glu | Val | Thr | Thr | Leu | Gln | Gln | Arg | Leu | Leu |
| | | | 245 | | | | | 250 | | | | | | 255 | |
| Gln | Pro | Asp | Phe | Gln | Pro | Val | Cys | Ala | Ser | Gln | Leu | Tyr | Pro | Arg | His |
| | | 260 | | | | | 265 | | | | | | 270 | | |
| Lys | His | Leu | Leu | Ile | Lys | Arg | Ser | Leu | Arg | Cys | Arg | Lys | Cys | Glu | His |
| | 275 | | | | | 280 | | | | | | 285 | | | |
| Asn | Leu | Ser | Lys | Pro | Glu | Phe | Asn | Pro | Thr | Ser | Ile | Lys | Phe | Lys | Ile |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Gln | Leu | Val | Ala | Val | Asn | Tyr | Ile | Pro | Glu | Val | Arg | Ile | Met | Ser | Ile |
| 305 | | | | | 310 | | | | 315 | | | | | | 320 |
| Pro | Asn | Leu | Arg | Tyr | Met | Lys | Glu | Ser | Gln | Val | Leu | Leu | Thr | Leu | Thr |
| | | | 325 | | | | | 330 | | | | | | 335 | |
| Asn | Pro | Val | Glu | Asn | Leu | Thr | His | Val | Thr | Leu | Phe | Glu | Cys | Glu | Glu |
| | | 340 | | | | | 345 | | | | | 350 | | | |
| Gly | Asp | Pro | Asp | Asp | Ile | Asn | Ser | Thr | Ala | Lys | Val | Val | Val | Pro | Pro |
| | 355 | | | | | 360 | | | | | | 365 | | | |
| Lys | Glu | Leu | Val | Leu | Ala | Gly | Lys | Asp | Ala | Ala | Ala | Glu | Tyr | Asp | Glu |
| | 370 | | | | 375 | | | | | | 380 | | | | |
| Leu | Ala | Glu | Pro | Gln | Asp | Phe | Gln | Asp | Asp | Pro | Asp | Ile | Ile | Ala | Phe |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Arg | Lys | Ala | Asn | Lys | Val | Gly | Ile | Phe | Ile | Lys | Val | Thr | Pro | Gln | Arg |
| | | | 405 | | | | | 410 | | | | | | 415 | |
| Glu | Glu | Gly | Glu | Val | Thr | Val | Cys | Phe | Lys | Met | Lys | His | Asp | Phe | Lys |
| | | 420 | | | | | 425 | | | | | 430 | | | |
| Asn | Leu | Ala | Ala | Pro | Ile | Arg | Pro | Ile | Glu | Glu | Ser | Asp | Gln | Gly | Thr |
| | 435 | | | | | 440 | | | | | | 445 | | | |
| Glu | Val | Ile | Trp | Leu | Thr | Gln | His | Val | Glu | Leu | Ser | Leu | Gly | Pro | Leu |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Leu | Pro | | | | | | | | | | | | | | |
| 465 | | | | | | | | | | | | | | | |

<210> 5765

<211> 3220

<212> DNA

<213> Homo sapiens

<400> 5765

cacgaggccc cacgcctcag gcaactgggtt gttaccgagg aagatggcgg cgccagaccc
 60
 gaggcgctag ggaagatcgc accgcggacg cccgctgagc ttggcgcacg ggccgaccag
 120
 gagctggtga ctgccctcat gtgtgatttg cggcggccag cggcaggtgg gatgatggac
 180
 ttggcctacg tctgtgagtg ggagaaatgg tccaagagca cccactgccc atcgggtgcc
 240
 ctggcctgcg cctggctcctg ccgaaatctc atcgccctca ccatggacct gcgcagcgat
 300
 gaccaggacc tgaccgcgat gatccacatc ctggacacgg agcacccttg ggacctgcac
 360
 tcgatccctt cagagcacca cgaggccatc acctgcctgg agtgggacca gtcaggctcc
 420
 cggctcctgt cagcagatgc cgacgggcag atcaagtgtt ggagcatggc ggaccacctg
 480
 gctaatagct gggagagctc agtgggcagc ctagtggagg gggaccccat tgtggccctg
 540
 tcctggctgc acaatgggtg gaaactggcc ctgcacgtgg agaagtcggg cgctccagc
 600
 ttcggggaga agttctcccg agtcaagtcc tcaccgtcgc tcacgtgtt cggcggcaag
 660
 cccatggagg gctggatcgc ggtgacggtc agcggcctgg tcaccgtgtc cctgctgaag
 720
 cccagcgggc aggtgctgac gtccaccgag agcctgtgcc ggtgcgcg cgcggtggcc
 780
 ctggccgaca tcgccttcac cggcggcggc aacatcgtgg tggccacggc ggacggcagc
 840
 agcgcgtcgc ccgtgcagtt ctacaagggt tgctgagcgg tggtagcga gaagtgccgt
 900
 atcgacacgg agatcctgcc ctccctgttc atgcgtgca ccaccgacct caaccgcaag
 960
 gacaagtttc ccgccatcac ccacctcaag ttctggccc gggacatgtc ggagcaggtg
 1020
 cttttgtgcg cgtccagcca gaccagcagc atcgtggagt gctggtccct gcgcaaggag
 1080
 ggactccccg tgaacaacat cttccagcag atctccccg tggttggcga caaacagccc
 1140
 acaattctca aatggcggtat cctatcgccc accaaccgatc tggaccgtgt gtcggccgtg
 1200
 gcgctgcccc agctgcccac ttcgctcacc aacaccgacc tcaagggtggc cagcgacaca
 1260
 cagttctacc ctggcctcgg gctggccctg gccttcacg acggcagcgt ccacatcgtg
 1320
 caccggtctt cactgcagac catggcggtc ttctacagct ccgcggcccc gaggcctgtg
 1380
 gatgagccgg ccatgaagcg ccccgccacc gcgggccccg ccgtccactt aaaggctatg
 1440
 cagctatcgt ggacgtcact ggccctggtg gggattgaca gccacgggaa gctgagcgtg
 1500

ctccgcctct caccttccat gggccacccg ctggaggtgg ggctggcgct gcggcacctg
1560
ctcttctctg tggagtactg catggtgacc ggctacgact ggtgggacat cctgctgcac
1620
gtgcagccca gtatggtaca gagcctggtg gagaagctgc acgaggagta cacgcgccag
1680
accgctgccc tgcagcaggt cctctccacc cggatcctgg ccatgaaggc ctcgctctgc
1740
aagctgtcgc cctgcacggg gaccgcgctg tgcgactacc acaccaagct cttcctcatc
1800
gccatcagct ccaccctgaa gtcgctgctg cgtcccccact ttctcaacac gcctgacaag
1860
agccccggcg accggctgac cgagatctgc accaagatca ccgacgtcga cattgacaag
1920
gtcatgatca acctcaagac ggaggaattt gtgctggaca tgacacactg caggcgctgc
1980
agcagctctt gcagtgggtg ggcgacttcg tgcgtgtacct gctggccagc ctaccaaac
2040
agccctgccc cacctcggag ccctgcccc a cctcggagcc ctccccacc tcggagccct
2100
ccccacctc ggagccctcc tctccatgaa gcctctgctg gttccctgct gaggccgggc
2160
cacagcttcc tgcgggacgg cacctcgtg ggcattgctt gggaattgat ggtggtcatc
2220
cgcattctgg gccttctgaa gccagctgc ctgcccgtgt atacggccac ctcgataacc
2280
caggacagca tgtccctgct cttccgcctg ctcaccaagc tctggatctg ctgtcgcgat
2340
gagggccag cgagcgagcc ggatgaggcg ctggtggatg aatgctgcct gctgcccagc
2400
cagctgctta tccccagcct ggactggctg ccagccagcg acggcctggt tagccgcctg
2460
cagcccaagc agcccttcg tctgcagttt ggccgggccc ccacgctgcc tggcagtgc
2520
gccaccctgc agctcgacgg cctcgccagg gcccaggcc agcccaagat cgaccacctg
2580
cggaggctgc accttggcgc ttgccccacg gaggaatgca aggcctgcac cagggtgcggc
2640
tgtgtacca tgcctcaagtc gcccaacaga accacggcgg tgaagcagtg ggagcagcgc
2700
tggtatcaaga actgcctgtg cgggtgggctc tgggtggcggg tgcccctcag ctaccctga
2760
gccagctgc ccctcagcta ctctcagct acccctcagc tgcccctgag cccggctgct
2820
gcaagagcca ccgctcgcgc tggactctcc tcggcgcggt taacctcagc ccgccctgca
2880
gggctgttga aggccgtggg ccggacgcct gcgtgaccag cagagcttct gaggaagccc
2940
ctgcctttgt ccagctgggc ccgcagtcca cacaccactc tcccaggacc ccagatccct
3000
ggaccatctg catccagagg accgtccgtg acggccgggg gtccaggcgg accttgtgg
3060
gaccgggctc gggcgtctcc tcggtttcc tgcctcacc gcggagagcg ctgaacctgg
3120

acaagcagcg gctgggaagg acaggtccaa taaacgccct ctgcgcccc aaaaaaaaaa
 3180
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3220

<210> 5766

<211> 873

<212> PRT

<213> Homo sapiens

<400> 5766

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Cys | Asp | Leu | Arg | Arg | Pro | Ala | Ala | Gly | Gly | Met | Met | Asp | Leu | Ala | 1 | 5 | 10 | 15 |
| Tyr | Val | Cys | Glu | Trp | Glu | Lys | Trp | Ser | Lys | Ser | Thr | His | Cys | Pro | Ser | 20 | 25 | 30 | |
| Val | Pro | Leu | Ala | Cys | Ala | Trp | Ser | Cys | Arg | Asn | Leu | Ile | Ala | Phe | Thr | 35 | 40 | 45 | |
| Met | Asp | Leu | Arg | Ser | Asp | Asp | Gln | Asp | Leu | Thr | Arg | Met | Ile | His | Ile | 50 | 55 | 60 | |
| Leu | Asp | Thr | Glu | His | Pro | Trp | Asp | Leu | His | Ser | Ile | Pro | Ser | Glu | His | 65 | 70 | 75 | 80 |
| His | Glu | Ala | Ile | Thr | Cys | Leu | Glu | Trp | Asp | Gln | Ser | Gly | Ser | Arg | Leu | 85 | 90 | 95 | |
| Leu | Ser | Ala | Asp | Ala | Asp | Gly | Gln | Ile | Lys | Cys | Trp | Ser | Met | Ala | Asp | 100 | 105 | 110 | |
| His | Leu | Ala | Asn | Ser | Trp | Glu | Ser | Ser | Val | Gly | Ser | Leu | Val | Glu | Gly | 115 | 120 | 125 | |
| Asp | Pro | Ile | Val | Ala | Leu | Ser | Trp | Leu | His | Asn | Gly | Val | Lys | Leu | Ala | 130 | 135 | 140 | |
| Leu | His | Val | Glu | Lys | Ser | Gly | Ala | Ser | Ser | Phe | Gly | Glu | Lys | Phe | Ser | 145 | 150 | 155 | 160 |
| Arg | Val | Lys | Phe | Ser | Pro | Ser | Leu | Thr | Leu | Phe | Gly | Gly | Lys | Pro | Met | 165 | 170 | 175 | |
| Glu | Gly | Trp | Ile | Ala | Val | Thr | Val | Ser | Gly | Leu | Val | Thr | Val | Ser | Leu | 180 | 185 | 190 | |
| Leu | Lys | Pro | Ser | Gly | Gln | Val | Leu | Thr | Ser | Thr | Glu | Ser | Leu | Cys | Arg | 195 | 200 | 205 | |
| Leu | Arg | Gly | Arg | Val | Ala | Leu | Ala | Asp | Ile | Ala | Phe | Thr | Gly | Gly | Gly | 210 | 215 | 220 | |
| Asn | Ile | Val | Val | Ala | Thr | Ala | Asp | Gly | Ser | Ser | Ala | Ser | Pro | Val | Gln | 225 | 230 | 235 | 240 |
| Phe | Tyr | Lys | Val | Cys | Val | Ser | Val | Val | Ser | Glu | Lys | Cys | Arg | Ile | Asp | 245 | 250 | 255 | |
| Thr | Glu | Ile | Leu | Pro | Ser | Leu | Phe | Met | Arg | Cys | Thr | Thr | Asp | Leu | Asn | 260 | 265 | 270 | |
| Arg | Lys | Asp | Lys | Phe | Pro | Ala | Ile | Thr | His | Leu | Lys | Phe | Leu | Ala | Arg | 275 | 280 | 285 | |
| Asp | Met | Ser | Glu | Gln | Val | Leu | Leu | Cys | Ala | Ser | Ser | Gln | Thr | Ser | Ser | 290 | 295 | 300 | |
| Ile | Val | Glu | Cys | Trp | Ser | Leu | Arg | Lys | Glu | Gly | Leu | Pro | Val | Asn | Asn | 305 | 310 | 315 | 320 |
| Ile | Phe | Gln | Gln | Ile | Ser | Pro | Val | Val | Gly | Asp | Lys | Gln | Pro | Thr | Ile | 325 | 330 | 335 | |
| Leu | Lys | Trp | Arg | Ile | Leu | Ser | Ala | Thr | Asn | Asp | Leu | Asp | Arg | Val | Ser | | | | |

4932

| | | | | |
|---|-----|-----|-----|-----|
| 770 | | 775 | | 780 |
| Gly Arg Ala Pro Thr Leu Pro Gly Ser Ala Ala Thr Leu Gln Leu Asp | | | | |
| 785 | | 790 | | 800 |
| Gly Leu Ala Arg Ala Pro Gly Gln Pro Lys Ile Asp His Leu Arg Arg | | | | |
| | 805 | | 810 | 815 |
| Leu His Leu Gly Ala Cys Pro Thr Glu Glu Cys Lys Ala Cys Thr Arg | | | | |
| | 820 | | 825 | 830 |
| Cys Gly Cys Val Thr Met Leu Lys Ser Pro Asn Arg Thr Thr Ala Val | | | | |
| | 835 | | 840 | 845 |
| Lys Gln Trp Glu Gln Arg Trp Ile Lys Asn Cys Leu Cys Gly Gly Leu | | | | |
| | 850 | | 855 | 860 |
| Trp Trp Arg Val Pro Leu Ser Tyr Pro | | | | |
| 865 | | 870 | | |

<210> 5767

<211> 1910

<212> DNA

<213> Homo sapiens

<400> 5767

```

ggtagaaaaa tacacctatt aacaacatta gtaaaccacca gaaaccatct aaaaggaatc
60
tttacatggg caagacgata tcctctctgt gagaccaca agtttggttt gagttactcc
120
tcagtatcgt ggggttttgct gctattctga agggatcccc catcacgctg gcagctgtgt
180
gccaggagag accctgaggg ctgcctcacc acagcaggaa cgcccttctc agtcccagcc
240
caatcctctc tcacactgcg gtgctctgtc cctatggaaa cagcctctgt atgtgtgtgt
300
gtgtgtgtgt gtgtgtgtgt gtgtgaataa tatatggaat aaagtttgag attccctgct
360
ttttcatggt accttagcct caattttaaa cttacattgt ttgttaaaat tatcaaatgg
420
acaacctcat tgctatggaa caaaaaagac tgtgaggaaa aagaatcata acttggaaaa
480
aaataagtga aaaggcattg agagattgct aagatttggt aagttaaaac aataatatat
540
ctagaaaaga ctgtgaaaat atatatctca aaagagaaca aggcatagtc agaaggctca
600
gtaaaacaat tacttttaaa gctgactaat aaaaagggtg agtgaaagaa ctcttccatc
660
cttgaccctt cctcaacttc tccctccgac totaccagtc tggatgcact aaagcagaat
720
aacctaaaag ccatgaaaaa gtgctggtat ttttcaggat ctcttcaaga caccttccgt
780
cttggtaacc tgaattctct ctctgatcaa ggcagctgat ggactttcaa tgtatttgga
840
gatgccgggt caaaaacgtc atcatcatct tctgctcctt cttctatcgg tttcatcttg
900
gcagaggctc gctgggtgtg ggatgacaca tgaagagagg acatgctgga ggtactccga
960
agaaactggt gcaagccgtc gtcactgtca ctggagctgg ctatactgtt cctcatttcc
1020

```

aacatggaga tctgtgtgca gaggctgagc tgatgttcca gctttttggc tttcttatca
 1080
 ttttaagggtgg gatcattcaa tgagtagagc ttattttgtga tgtcttttcc aataagatac
 1140
 ctaaagatttt catacaagaa aggttctgat tccagaaagt atgttaatct ttctcttgac
 1200
 cagcataaaa atctgcagtt atcatctgca ataatgggtga cctggaattt ttcacctttg
 1260
 tgcattctgag ttgatctaaa ttcaggagaa tctataaagg cacaggggta aatgttatgc
 1320
 agaaaatgtc ctcgatagga gaccttcatt tttcccttca agagaatact cagacgggtca
 1380
 tcaactgagg ttttatcctc tgcagcataa gtttggccct ttttcaagggt ttggatcatg
 1440
 caaaactgtc cagttagtct tctgaacaaa tctggaggca cacggagtgg ttcaaacaat
 1500
 cgccgggtaca tgccactgag ttccttttca atctttaccg gtctcttctt gtataaaaga
 1560
 tacgacagat gcaaaatgtt gacaccaag aacacagagt tccagatcat tatatccaag
 1620
 gcacatcggg agagagtggc ccagacgata taaagggtac atcctagagt taacattccc
 1680
 ctaagaaata tcatatgaag gtgaagagta gttggaataa ccaacccaac tgcaaaacaa
 1740
 atatttgcta catgaaaaac cagatgatgt atctctctcc agttttcaca agtgggtctta
 1800
 ttggaaggca caggtatgat acttttctaac tcaggtgtaa aacctatggc agttgattct
 1860
 ctcaatgggc tggactctgt ataattcatt ttgaaaatcc cggtctggtcc
 1910

<210> 5768

<211> 360

<212> PRT

<213> Homo sapiens

<400> 5768

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asn | Tyr | Thr | Glu | Ser | Ser | Pro | Leu | Arg | Glu | Ser | Thr | Ala | Ile | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Phe | Thr | Pro | Glu | Leu | Glu | Ser | Ile | Ile | Pro | Val | Pro | Ser | Asn | Lys | Thr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Cys | Glu | Asn | Trp | Arg | Glu | Ile | His | His | Leu | Val | Phe | His | Val | Ala |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asn | Ile | Cys | Phe | Ala | Val | Gly | Leu | Val | Ile | Pro | Thr | Thr | Leu | His | Leu |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| His | Met | Ile | Phe | Leu | Arg | Gly | Met | Leu | Thr | Leu | Gly | Cys | Thr | Leu | Tyr |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ile | Val | Trp | Ala | Thr | Leu | Tyr | Arg | Cys | Ala | Leu | Asp | Ile | Met | Ile | Trp |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Asn | Ser | Val | Phe | Leu | Gly | Val | Asn | Ile | Leu | His | Leu | Ser | Tyr | Leu | Leu |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Tyr | Lys | Lys | Arg | Pro | Val | Lys | Ile | Glu | Lys | Glu | Leu | Ser | Gly | Met | Tyr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Arg | Arg | Leu | Phe | Glu | Pro | Leu | Arg | Val | Pro | Pro | Asp | Leu | Phe | Arg | Arg |

| | | |
|---|-----------------------------|-----|
| 130 | 135 | 140 |
| Leu Thr Gly Gln Phe Cys Met Ile Gln Thr | Leu Lys Lys Gly Gln Thr | |
| 145 | 150 | 155 |
| Tyr Ala Ala Glu Asp Lys Thr Ser Val Asp | Asp Arg Leu Ser Ile Leu | 160 |
| | 165 | 170 |
| Leu Lys Gly Lys Met Lys Val Ser Tyr Arg | Gly His Phe Leu His Asn | 175 |
| | 180 | 185 |
| Ile Tyr Pro Cys Ala Phe Ile Asp Ser Pro | Glu Phe Arg Ser Thr Gln | 190 |
| | 195 | 200 |
| Met His Lys Gly Glu Lys Phe Gln Val Thr | Ile Ile Ala Asp Asp Asn | 205 |
| | 210 | 215 |
| Cys Arg Phe Leu Cys Trp Ser Arg Glu Arg | Leu Thr Tyr Phe Leu Glu | 220 |
| 225 | 230 | 235 |
| Ser Glu Pro Phe Leu Tyr Glu Ile Phe Arg | Tyr Leu Ile Gly Lys Asp | 240 |
| | 245 | 250 |
| Ile Thr Asn Lys Leu Tyr Ser Leu Asn Asp | Pro Thr Leu Asn Asp Lys | 255 |
| | 260 | 265 |
| Lys Ala Lys Lys Leu Glu His Gln Leu Ser | Leu Cys Thr Gln Ile Ser | 270 |
| | 275 | 280 |
| Met Leu Glu Met Arg Asn Ser Ile Ala Ser | Ser Ser Asp Ser Asp Asp | 285 |
| | 290 | 295 |
| Gly Leu His Gln Phe Leu Arg Ser Thr Ser | Ser Met Ser Ser Leu His | 300 |
| 305 | 310 | 315 |
| Val Ser Ser Pro His Gln Arg Ala Ser Ala | Lys Met Lys Pro Ile Glu | 320 |
| | 325 | 330 |
| Glu Gly Ala Glu Asp Asp Asp Asp Val | Phe Glu Pro Ala Ser Pro Asn | 335 |
| | 340 | 345 |
| Thr Leu Lys Val His Gln Leu Pro | | 350 |
| | 355 | 360 |

<210> 5769

<211> 427

<212> DNA

<213> Homo sapiens

<400> 5769

gctagcagtg gggttgctag tgacaccata gcatttggag agcatcacct ccctcctgtg
60
agtatggcat ccactgtacc tcactccctt cgtcaggcga gagataacac aatcatggat
120
ctgcagacac agctgaagga agtattaaga gaaaatgatc tcttgcgga ggatgtggaa
180
gtaaaggaga gcaaattgag ttcttcaatg aatagcatca agatcttctg gggcccagag
240
ctgaagaagg aacgagccct gagaaaggat gaagcttcca aaatccccat ttggaaggaa
300
cagtacagag ttgtacaaga ggaaaaccag gtaagttcta cgtgtgttta cctttattgg
360
ctgaattcat gtatataaat gaaatagcct tttttttccc ctttcctaga tttttccctt
420
cacgcgt
427

<210> 5770

<211> 85
 <212> PRT
 <213> Homo sapiens

<400> 5770
 Leu Gln Thr Gln Leu Lys Glu Val Leu Arg Glu Asn Asp Leu Leu Arg
 1 5 10 15
 Lys Asp Val Glu Val Lys Glu Ser Lys Leu Ser Ser Ser Met Asn Ser
 20 25 30
 Ile Lys Ile Phe Trp Gly Pro Glu Leu Lys Lys Glu Arg Ala Leu Arg
 35 40 45
 Lys Asp Glu Ala Ser Lys Ile Pro Ile Trp Lys Glu Gln Tyr Arg Val
 50 55 60
 Val Gln Glu Glu Asn Gln Val Ser Ser Thr Cys Val Tyr Leu Tyr Trp
 65 70 75 80
 Leu Asn Ser Cys Ile
 85

<210> 5771
 <211> 2539
 <212> DNA
 <213> Homo sapiens

<400> 5771
 gtacacattc caaaaagaga ttgatacact tgcaatgaag ggttcttgct tgagggagcc
 60
 aggagtcggg tttgtcttgc caatggaagt tggagtggag ccactcccga ctgtgtgcct
 120
 gtcagatgtg ccaccccgcc acaactggcc aatgggggtga cggaaggcct ggactatggc
 180
 ttcatgaagg aagtaacatt ccactgtcat gggctacatc ttgcacggtg ctccaaaact
 240
 cacctgtcag tcagaggcaa ctgggatgca gagattcctc tctgtaaacc agtcaactgt
 300
 ggacctctg aagatcttgc ccatggtttc cctaattggtt tttcctttat tcatgggggc
 360
 catatacagt atcagtgtt tcttggttat aagctccatg gaaattcatc aagaaggtgc
 420
 ctctccaatg gctcctggag tggcagctca ccttcttgcc tgccttgcag atgttccaca
 480
 ccagtaattg aatatggaac tgtcaatggg acagattttg actgtggaag ggcagcccgg
 540
 attcagtgtc tcaaaggctt caagctccta ggactttctg aaatcacctg tgaagccgat
 600
 ggccagtgga gctctgggtt cccccactgt gaacacactt cttgtggttc tcttccaatg
 660
 ataccaaagc cgttcacag tgagaccagc tcttggaagg aaaatgtgat aacttacagc
 720
 tgcaggtctg gatattgtcat acaaggcagt tcagatctga tttgtacaga gaaaggggta
 780
 tggaaccagc cttatccagt ctgtgagccc ttgtcctgtg ggtccccacc gtctgtcgcc
 840
 aatgcagtgg caactggaga ggcacacacc tatgaaagtg aagtgaaact cagatgtctg
 900

gaaggttata cgatggatac agatacagat acaatcacct gtcagaaaga tggctgctgg
960
ttccctgaga gaatctcctg cagtcctaaa aaatgtcctc tcccggaaaa cataacacat
1020
atacttgtag atggggacga tttcagtgtg aataggcaag tttctgtgtc atgtgcagaa
1080
gggtatacct ttgagggagt taacatatca gtatgtcagc ttgatggaac ctgggagcca
1140
ccattctccg atgaatcttg cagtcagtt tcttgtggga aacctgaaag tccagaacat
1200
ggatttgtgg ttggcagtaa atacaccttt gaaagcacia ttatttatca gtgtgagcct
1260
ggctatgaac tagaggggaa caggggaacgt gtctgccagg agaacagaca gtggagtggg
1320
ggggtggcaa tatgcaaaga gaccaggtgt gaaactccac ttgaatttct caatgggaaa
1380
gctgacattg aaaacaggac gactggaccc aacgtggtat attcctgcaa cagaggctac
1440
agtcttgaag ggccatctga ggcacactgc acagaaaatg gaacctggag ccacccagtc
1500
cctctctgca aaccaaattc atgccctgtt ccttttgtga tccccgagaa tgctctgctg
1560
tctgaaaagg agttttatgt tgatcagaat gtgtccatca aatgtaggga aggttttctg
1620
ctgcagggcc acggcatcat tacctgcaac cccgacgaga cgtggacaca gacaagcgcc
1680
aaatgtgaaa aaatctcatg tgggtccacca gctcacgtag aaaatgcaat tgctcgaggc
1740
gtacattatc aatatggaga catgatcacc tactcatgtt acagtggata catgttggag
1800
ggtttcctga ggagtgtttg tttagaaaat ggaacatgga catcacctcc tatttgcaga
1860
gctgtctgtc gatttccatg tcagaatggg gggcatctgc caacgccccaa atgcttgttc
1920
ctgtccagag ggctggatgg ggcgcctctg tgaagaacca atctgcattc ttcctgtct
1980
gaacggaggt cgctgtgtgg ccccttacca gtgtgactgc ccgcctggct ggacggggtc
2040
tcgctgtcat acagctgttt gccagtctcc ctgcttaaatt ggtggaaaat gtgtaagacc
2100
aaaccgatgt cactgtcttt cttcttggac gggacataac tgttccagga aaaggaggac
2160
tgggttttaa ccactgcacg accatctggc tctcccaaaa gcaggatcat ctctcctcgg
2220
tagtgccctg gcacccctga acttatgcaa agaaagtcca acatgggtgct gggcttctgt
2280
tagtaaaactt gttacttggg gttacttttt ttattttgtg atatattttg ttattccttg
2340
tgacatactt tcttacatgt ttccattttt aaatatgcct gtatttttcta tataaaaaatt
2400
atattaaata gatgctgctc taccctcaca aaatgtacat attctgctgt ctattgggaa
2460
agttcctggg acacattttt attcagttac ttaaaatgat ttttccatta aagtatattt
2520

tgctactaaa taaaaaaaaa
2539

<210> 5772
<211> 642
<212> PRT
<213> Homo sapiens

<400> 5772
Tyr Thr Cys Asn Glu Gly Phe Leu Leu Glu Gly Ala Arg Ser Arg Val
1 5 10 15
Cys Leu Ala Asn Gly Ser Trp Ser Gly Ala Thr Pro Asp Cys Val Pro
20 25 30
Val Arg Cys Ala Thr Pro Pro Gln Leu Ala Asn Gly Val Thr Glu Gly
35 40 45
Leu Asp Tyr Gly Phe Met Lys Glu Val Thr Phe His Cys His Gly Leu
50 55 60
His Leu Ala Arg Cys Ser Lys Thr His Leu Ser Val Arg Gly Asn Trp
65 70 75 80
Asp Ala Glu Ile Pro Leu Cys Lys Pro Val Asn Cys Gly Pro Pro Glu
85 90 95
Asp Leu Ala His Gly Phe Pro Asn Gly Phe Ser Phe Ile His Gly Gly
100 105 110
His Ile Gln Tyr Gln Cys Phe Pro Gly Tyr Lys Leu His Gly Asn Ser
115 120 125
Ser Arg Arg Cys Leu Ser Asn Gly Ser Trp Ser Gly Ser Ser Pro Ser
130 135 140
Cys Leu Pro Cys Arg Cys Ser Thr Pro Val Ile Glu Tyr Gly Thr Val
145 150 155 160
Asn Gly Thr Asp Phe Asp Cys Gly Lys Ala Ala Arg Ile Gln Cys Phe
165 170 175
Lys Gly Phe Lys Leu Leu Gly Leu Ser Glu Ile Thr Cys Glu Ala Asp
180 185 190
Gly Gln Trp Ser Ser Gly Phe Pro His Cys Glu His Thr Ser Cys Gly
195 200 205
Ser Leu Pro Met Ile Pro Asn Ala Phe Ile Ser Glu Thr Ser Ser Trp
210 215 220
Lys Glu Asn Val Ile Thr Tyr Ser Cys Arg Ser Gly Tyr Val Ile Gln
225 230 235 240
Gly Ser Ser Asp Leu Ile Cys Thr Glu Lys Gly Val Trp Asn Gln Pro
245 250 255
Tyr Pro Val Cys Glu Pro Leu Ser Cys Gly Ser Pro Pro Ser Val Ala
260 265 270
Asn Ala Val Ala Thr Gly Glu Ala His Thr Tyr Glu Ser Glu Val Lys
275 280 285
Leu Arg Cys Leu Glu Gly Tyr Thr Met Asp Thr Asp Thr Asp Thr Ile
290 295 300
Thr Cys Gln Lys Asp Gly Arg Trp Phe Pro Glu Arg Ile Ser Cys Ser
305 310 315 320
Pro Lys Lys Cys Pro Leu Pro Glu Asn Ile Thr His Ile Leu Val His
325 330 335
Gly Asp Asp Phe Ser Val Asn Arg Gln Val Ser Val Ser Cys Ala Glu
340 345 350
Gly Tyr Thr Phe Glu Gly Val Asn Ile Ser Val Cys Gln Leu Asp Gly

```
<210> 5773
<211> 579
<212> DNA
<213> Homo sapiens
```

```

<400> 5773
nnacgcgtga ggggcctgag gcgagcgggt agagcgtctc ccggaaggat gggccgggtct
60
cggagccgga gctcgtcccg ctccaagcac accaagagca gcaagcacia caagaagcgc
120
agccgggtccc ggtcgcgatc ccgggacaag gagcgcgtgc ggaagcgttc caaatctcgg
180
gaaagtaaac ggaaccggcg gcgggagtcg cgggtcccgtt cgcgctccac caacacggcc
240
gtgtcccggc gcgagcggga ccgggagcgc ctcgtcccc gcccgaccgc atcgacatct
300

```

tcggg'gcac ggtgagcaag cgcagcagcc tggacgagaa gcagaagcga gaggaggagg
 360
 agaagaaagc ggagttcgag cggcagcgaa aaattcgaca gcaagaaata gaagaaaaac
 420
 tcatcgagga agaaacagca cgaagagtag aagaattggt agcaanaaag ggtggaggaa
 480
 gaactggaga aaaggaagga tgaaattgaa cgagaagttc tccgaagggt ggaggaagcc
 540
 aaacgcatca tggaaaagca gttgctcgaa gaactcgag
 579

<210> 5774

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5774

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Arg | Val | Arg | Gly | Leu | Arg | Arg | Ala | Val | Arg | Ala | Ser | Pro | Gly | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Met | Gly | Arg | Ser | Arg | Ser | Arg | Ser | Ser | Ser | Arg | Ser | Lys | His | Thr | Lys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Ser | Lys | His | Asn | Lys | Lys | Arg | Ser | Arg | Ser | Arg | Ser | Arg | Ser | Arg |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asp | Lys | Glu | Arg | Val | Arg | Lys | Arg | Ser | Lys | Ser | Arg | Glu | Ser | Lys | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Asn | Arg | Arg | Arg | Glu | Ser | Arg | Ser | Arg | Ser | Arg | Ser | Thr | Asn | Thr | Ala |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Val | Ser | Arg | Arg | Glu | Arg | Asp | Arg | Glu | Arg | Pro | Arg | Pro | Arg | Pro | Thr |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Ala | Ser | Thr | Ser | Ser | Gly | Ala | Arg | | | | | | | | |
| | | | | 100 | | | | | | | | | | | |

<210> 5775

<211> 1441

<212> DNA

<213> Homo sapiens

<400> 5775

cgctcctcctc ccgctcggaa ggtcccaagg tgagacacct tcagcaggtc tcaggaaga
 60
 tggcagccct aggggacatt caggagtccc cttctgtccc gtccctgtc agtctctcat
 120
 caccggggac acctggaacc cagcaccacg agcctcagct tcacctccat gggcatcaac
 180
 atgcctaagg tgctctccca gccgtccgac ctggatctcc aagacgtaga ggaagtggag
 240
 atcggcagag acaccttctg gcccgactcc gagcccaagc cggagcaggc tccacgtctt
 300
 cctggctctc aggccctga cgagggggcg ggcggggcgc tgcgcacctc cgtgaggagc
 360
 cttccccgca gggcccgggtg cagcgccggc ttcgggcttg aatccagcgc ggagcggccg
 420
 gcggggccagc cgctggggc cgctcccttg gccagccgc ggggcgctg gcgcgtgacg
 480

ctctgtgcagc aagcagcggc cgggcccag ggtgcgccc agcgggctgc cgagctggga
 540
 gtcaacttcg gtcggagccg gcagggcagc gcgcggggga ccaagccgca caggtgcgag
 600
 gcctgcggca agagtttcaa gtataactcg ctgctcctga agcaccagcg catccacacg
 660
 ggcgagaagc cctacgcctg ccacgagtgc ggcaagtgtt tcgccgcagc ttcgcgcttc
 720
 atccagcacc agcgcattca cagcggcgag aagccctacg cctgccccga gtgcagcaag
 780
 accttcacgc gcagctccaa cctcatcaag caccaggtca tccacagcgg cgagcggccc
 840
 ttcgcctgcg gcgactgcgg caaactgttc cgccgcagct tcgcgctcct ggagcacgcg
 900
 cgctgcact tcttcggca caaccgcaca cacacgggcg agaagcccta ccactgcctc
 1020
 gactgcggca agagcttcag ccacagctcg cacctcatca agcaccagcg caccacacgt
 1080
 ggcgtgcggc cctacgcctg cccgttgtgt ggcaagagct tcagccggcg ctccaacctg
 1140
 caccggcacg agaagatcca caccaccggg cccaaggccc tggccatgct gatgctgggg
 1200
 gcggcggcg cgggggctct ggccacaccc ccaccgctc ccacctagga ggccaggaaa
 1260
 gggggagcgg ggcgcccagg gccactggaa cagccccact ggagtcaagg ctccgagggg
 1320
 ggagagaggg gctcgggaag ggagctgggg cggtaggggc atggggtag gcattggcat
 1380
 gggggagggc gagggcgaga aagggcaggc actctgcgaa ttaaaggcct tggacttgaa
 1440
 a
 1441

<210> 5776

<211> 359

<212> PRT

<213> Homo sapiens

<400> 5776

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Ile | Asn | Met | Pro | Lys | Val | Leu | Ser | Gln | Pro | Ser | Asp | Leu | Asp |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Leu | Gln | Asp | Val | Glu | Glu | Val | Glu | Ile | Gly | Arg | Asp | Thr | Phe | Trp | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asp | Ser | Glu | Pro | Lys | Pro | Glu | Gln | Ala | Pro | Arg | Ser | Pro | Gly | Ser | Gln |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Pro | Asp | Glu | Gly | Ala | Gly | Gly | Ala | Leu | Arg | Thr | Ser | Val | Arg | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Pro | Arg | Arg | Ala | Arg | Cys | Ser | Ala | Gly | Phe | Gly | Pro | Glu | Ser | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ala | Glu | Arg | Pro | Ala | Gly | Gln | Pro | Pro | Gly | Ala | Val | Pro | Cys | Ala | Gln |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Pro | Arg | Gly | Ala | Trp | Arg | Val | Thr | Leu | Val | Gln | Gln | Ala | Ala | Ala | Gly |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | 100 | | | | 105 | | | | 110 | | | | |
| Pro | Glu | Gly | Ala | Pro | Glu | Arg | Ala | Ala | Glu | Leu | Gly | Val | Asn | Phe | Gly |
| | | | 115 | | | | 120 | | | | 125 | | | | |
| Arg | Ser | Arg | Gln | Gly | Ser | Ala | Arg | Gly | Thr | Lys | Pro | His | Arg | Cys | Glu |
| | | | 130 | | | | 135 | | | | 140 | | | | |
| Ala | Cys | Gly | Lys | Ser | Phe | Lys | Tyr | Asn | Ser | Leu | Leu | Leu | Lys | His | Gln |
| 145 | | | 150 | | | | 155 | | | | 160 | | | | |
| Arg | Ile | His | Thr | Gly | Glu | Lys | Pro | Tyr | Ala | Cys | His | Glu | Cys | Gly | Lys |
| | | | 165 | | | | 170 | | | | 175 | | | | |
| Cys | Phe | Ala | Ala | Ala | Ser | Arg | Phe | Ile | Gln | His | Gln | Arg | Ile | His | Ser |
| | | | 180 | | | | 185 | | | | 190 | | | | |
| Gly | Glu | Lys | Pro | Tyr | Ala | Cys | Pro | Glu | Cys | Ser | Lys | Thr | Phe | Thr | Arg |
| | | | 195 | | | | 200 | | | | 205 | | | | |
| Ser | Ser | Asn | Leu | Ile | Lys | His | Gln | Val | Ile | His | Ser | Gly | Glu | Arg | Pro |
| 210 | | | 215 | | | | 220 | | | | 225 | | | | |
| Phe | Ala | Cys | Gly | Asp | Cys | Gly | Lys | Leu | Phe | Arg | Arg | Ser | Phe | Ala | Leu |
| 225 | | | 230 | | | | 235 | | | | 240 | | | | |
| Leu | Glu | His | Ala | Arg | Val | His | Ser | Gly | Glu | Lys | Pro | Tyr | Glu | Cys | Ser |
| | | | 245 | | | | 250 | | | | 255 | | | | |
| Asp | Cys | Gly | Lys | Cys | Phe | Arg | Gly | Arg | Ser | His | Phe | Phe | Arg | His | Asn |
| | | | 260 | | | | 265 | | | | 270 | | | | |
| Arg | Thr | His | Thr | Gly | Glu | Lys | Pro | Tyr | His | Cys | Leu | Asp | Cys | Gly | Lys |
| 275 | | | 280 | | | | 285 | | | | 290 | | | | |
| Ser | Phe | Ser | His | Ser | Ser | His | Leu | Ile | Lys | His | Gln | Arg | Thr | His | Arg |
| 290 | | | 295 | | | | 300 | | | | 305 | | | | |
| Gly | Val | Arg | Pro | Tyr | Ala | Cys | Pro | Leu | Cys | Gly | Lys | Ser | Phe | Ser | Arg |
| 305 | | | 310 | | | | 315 | | | | 320 | | | | |
| Arg | Ser | Asn | Leu | His | Arg | His | Glu | Lys | Ile | His | Thr | Thr | Gly | Pro | Lys |
| | | | 325 | | | | 330 | | | | 335 | | | | |
| Ala | Leu | Ala | Met | Leu | Met | Leu | Gly | Ala | Ala | Ala | Ala | Gly | Ala | Leu | Ala |
| | | | 340 | | | | 345 | | | | 350 | | | | |
| Thr | Pro | Pro | Pro | Ala | Pro | Thr | | | | | | | | | |
| 355 | | | | | | | | | | | | | | | |

<210> 5777

<211> 1431

<212> DNA

<213> Homo sapiens

<400> 5777

ggaaggctcg cctgggagct catacctggc tggggccgag gattggctgt tccggggcta
60
gggagcgctt tctcccggga accgcggctg tgacccaagt ggcccggacc agtttggggc
120
tgctgctggc ctgcctcaag caaccaggta cgtaggtcgg cggcccagct cggcgctgcy
180
gtgggagccg gagggcgaca gtcagagccg gggtgccagc gggacgcgac cgccagatcc
240
acttaggacc ccgtcgttct gcgaagcggc cacgtctgag tcccgggggc tcctcgctgt
300
gcagatgtcg ccttaggacc tcggccagga taccctctgc catgctcttg tgctgccgct
360
gatcaccgac tggcccttgt aagcaccttc gcagcaggaa gcccagagct gcgcctgcc
420

tttctgaagg ctgtggaaga ggttgagtg ggcgcattctt agcttgcccc atccccattt
 480
 gaggtctgtc ggagctgccc ttcagtgtga gcatccacaa tgggtacccc agcctcggtg
 540
 gtcagtgagc caccctcttg gcaggcccg attgaggccc ggggcccgaac gcaggcctcg
 600
 gccaacatct tccaggacgc cgagctgctg cagatccaag cctgtttca acgcagcggg
 660
 gaccagctgg ccgaggaacg ggcacagatc atctgggaat gtgcagggga ccaccgtgtg
 720
 gctgaggccc tcaagaggct gcgcaggaag agggcccca ggcagaaacc cctggggcca
 780
 ctgctacac cactgcagcc gcctcagaat cctggagccc cactctgcac tggccaaccc
 840
 acagagtgcc acagagacag cctccagtga gcagtatctg cactctagga agaaaagtgc
 900
 caggatccgc cggaactgga ggaagtcagg cccacaagc tacctccacc agatcagaca
 960
 ctgatccagg gaaagagcca ggaatggcag tgtcttcctt cttgccaaaa ggctggggga
 1020
 ggtgaaggaa gagagacttt aggcaagcag cccaaagggg taaatgaaag caagaggctg
 1080
 ctgccactga cctgctccat tcagaacaag actggatgct tctgttgagc tctccattat
 1140
 gtgggaccca ttcctcacca aaatgaggag agacagtgcac tgttcctgcc acagtccttc
 1200
 ccagtctaac actattcctg ggctgcatga tattcccctg ggagcaaagt gacaggcact
 1260
 tagatgcagc atttcaccac tcatgctact aatcatctac ctgctactac tgtaaaccat
 1320
 ggttcagca gcctgttcca cccccaca ccatcaggat agcacaggga aactgtagtt
 1380
 taagtggcaa ataaaaacat ttgcatcaaa aaaaaaaaaa aaaaaaaaaa a
 1431

<210> 5778

<211> 164

<212> PRT

<213> Homo sapiens

<400> 5778

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Thr | Leu | Lys | Gly | Ser | Ser | Asp | Arg | Pro | Gln | Met | Gly | Met | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Ala | Lys | Met | Arg | Pro | Leu | Gln | Pro | Leu | Pro | Gln | Pro | Ser | Glu | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Gly | Ala | Ala | Leu | Gly | Phe | Leu | Leu | Arg | Arg | Cys | Leu | Gln | Gly | Pro |
| | | 35 | | | | | 40 | | | | 45 | | | | |
| Val | Gly | Asp | His | Gly | Gln | His | Lys | Ser | Met | Ala | Glu | Gly | Ile | Leu | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Val | Leu | Arg | Arg | His | Leu | Gln | His | Glu | Glu | Ala | Pro | Gly | Leu | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Arg | Gly | Arg | Phe | Ala | Glu | Arg | Arg | Gly | Pro | Lys | Trp | Ile | Trp | Arg | Ser |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Arg | Pro | Ala | Gly | Thr | Pro | Ala | Leu | Thr | Val | Ala | Leu | Arg | Leu | Pro | Pro |


```

          100          105          110
Gln Arg Arg Ala Gly Pro Pro Thr Tyr Val Pro Gly Cys Leu Arg Gln
          115          120          125
Ala Ala Arg Ser Pro Lys Leu Val Arg Ala Thr Trp Val Thr Ala Ala
          130          135          140
Val Pro Gly Arg Lys Arg Ser Leu Ala Pro Glu Gln Pro Ile Leu Gly
145          150          155          160
Pro Ser Gln Val

```

<210> 5779
 <211> 371
 <212> DNA
 <213> Homo sapiens

```

<400> 5779
ctcttgagac gtgtggaggg aaggaagggga agaacccatg atctacccca gaggcattgga
60
cgggagagag ggggtgatttc agccttgtct ggcattccctt gtgtctgcnt gaggggtgtgt
120
gcacacggga atgtgtgcgg gtgtgtgtgc gtgcatgcag ctgtgtgtgg atgtgcantc
180
gtgtgtgggt gtgtagggtgt gtgtgggtgt gtgcaccagt gcagggtgtgc atgggtgtgt
240
acagggtgggt gtgtgtatgt gtgtgggggt gtgcccattct gtgcagggtgt gtgggtgtgc
300
agggtcncat gcctgtgtgt ggggtgtgncc ccgtgtgtac ccctgtggag gtgtgtgggt
360
gtgtgcagtg t
371

```

<210> 5780
 <211> 123
 <212> PRT
 <213> Homo sapiens

```

<400> 5780
Leu Leu Arg Arg Val Glu Gly Arg Lys Gly Arg Thr His Asp Leu Pro
1      5      10      15
Gln Arg His Gly Arg Glu Arg Gly Val Ile Ser Ala Leu Ser Gly Ile
20     25     30
Pro Cys Val Cys Xaa Arg Val Cys Ala His Gly Asn Val Cys Gly Cys
35     40     45
Val Cys Val His Ala Ala Val Cys Gly Cys Ala Xaa Val Cys Gly Cys
50     55     60
Val Gly Val Cys Gly Cys Val His Gln Cys Arg Cys Ala Trp Val Cys
65     70     75     80
Thr Gly Gly Cys Val Tyr Val Cys Gly Gly Val Pro Ile Cys Ala Gly
85     90     95
Val Trp Val Cys Arg Val Xaa Cys Leu Cys Val Gly Val Xaa Pro Cys
100    105    110
Val Pro Leu Trp Arg Cys Val Gly Val Cys Ser
115    120

```

<210> 5781
 <211> 845
 <212> DNA
 <213> Homo sapiens

<400> 5781
 ggggttccgt gccccaaaat cgagggagcc gtgggcttgg ggtccggatc gcggccgcgg
 60
 ggcgctggcg tgcggtgtca tttctgcggt gtaaagtctc ccaccttggc cgatttcaag
 120
 ccaccaggtg aggatggcac tgcaacatct tccactgagg ctccagctgc cctctcaggt
 180
 acatcagggc ctgganegtc ctctcctcca ggagggccag gactcgcccc cctgccagcc
 240
 cccgaagcat tgcagccagg agtgcagcgt gggggccctg caggccatgg ccaggcccca
 300
 gcgccaccag caccaggtca ggctggaagc cataggccag gggcagcacc aagcccaaga
 360
 tgcagctcag gaaaccaccg gtcactactg gcagtggcgt ggagacatgg aacatggata
 420
 gggcagccgc ctcttggccc ctgatgttca gccacagact cctcccgtca tgggcgaggt
 480
 ctggaggccg gtccagctgt cccagggcca cgcacagcag cctggaagaa gagctggcct
 540
 caggacaggt gttcatgttg tccagagtcc attcccagaa ctctctgtgc ttggccagcc
 600
 aggatagggg tgcccacagg tcttgccgtc agaggctcag gatggccaag tgaggcttac
 660
 ctctgggctc cgtgggacag gcctctccga acagccacat ccagggtggc tgctgcagca
 720
 gaggtgggag tggctgctat accactgttc acctgtggga tgaataaaca gtggagaatg
 780
 aggcaccaac caactcccaa gccaggtaaa cagatccaca gttcccttca ttcggtgtgt
 840
 ctctg
 845

<210> 5782
 <211> 147
 <212> PRT
 <213> Homo sapiens

<400> 5782
 Gly Val Pro Cys Pro Lys Ile Glu Gly Ala Val Gly Leu Gly Ser Gly
 1 5 10 15
 Ser Arg Pro Arg Gly Ala Gly Val Arg Cys His Phe Cys Gly Val Asn
 20 25 30
 Ala Pro Thr Leu Ala Asp Phe Lys Pro Pro Gly Glu Asp Gly Thr Ala
 35 40 45
 Thr Ser Ser Thr Glu Ala Pro Ala Ala Leu Ser Gly Thr Ser Gly Pro
 50 55 60
 Gly Xaa Ser Ser Pro Pro Gly Gly Pro Gly Leu Gly Pro Leu Pro Ala
 65 70 75 80
 Pro Glu Ala Leu Gln Pro Gly Val Gln Arg Gly Gly Pro Ala Gly His

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
| | | | | 85 | | | | | 90 | | | | | 95 | | | | | |
| Gly | Gln | Ala | Pro | Ala | Pro | Pro | Pro | Ala | Pro | Gly | Gln | Ala | Gly | Ser | His | Arg | | | |
| | | | 100 | | | | | | 105 | | | | | 110 | | | | | |
| Pro | Gly | Ala | Ala | Pro | Ser | Pro | Arg | Cys | Ser | Ser | Gly | Asn | His | Arg | Ser | | | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | | | |
| Ser | Leu | Ala | Val | Ala | Trp | Arg | His | Gly | Thr | Trp | Ile | Gly | Gln | Pro | Pro | | | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | | | |
| Pro | Cys | Pro | | | | | | | | | | | | | | | | | |
| 145 | | | | | | | | | | | | | | | | | | | |

<210> 5783

<211> 1839

<212> DNA

<213> Homo sapiens

<400> 5783

```

gtgggagcgg ccatggaccg cttcgtttgg accagcggcc tcctggagat caacgagacc
60
ctggatgatcc agcagcgcgg ggtgcgaatc tacgatggcg aggagaagat aaaatttgat
120
gctgggactc tccttcttag tacacaccga ctgatttggg gagatcagaa aaatcatgag
180
tggtgcatgg ccattctcct ttcccaaatt gtgttcattg aagaacaggc ggctggaatt
240
gggaagagtg ccaaaatagt ggttcattct caccagctc ctctaacaaga agaacctggc
300
ccattccaga gtagtaagaa ctctacatc aaactctcct tcaaagaaca tggccagatt
360
gagttttaca ggcgtttatc agaggaaatg acacaaagaa gatgggagaa tatgccagtt
420
tcccgatcat tacaacaaaa tagaggaccc cagccaggaa gaataagggc ttaggaatt
480
gtaggtattg aaaggaaact ggaagaaaaa agaaaagaaa ctgacaaaaa catttctgag
540
gcctttgaag acctcagcaa actaatgatc aaggctaagg aaatgggtgga attatcaaaa
600
tcaattgcta ataaaattaa agacaaacaa ggtgacatca cagaagatga gaccatcagg
660
tttaaactct acttgctgag catgggaata gctaaccag ttaccagaga aacctacggc
720
tcaggcacac agtaccacat gcagctggcc aaacaactgg ctggaatatt gcaggtgcct
780
ttagaggaac gagggggaat aatgtcactc acggagggtg actgcttagt aaaccgagct
840
cgaggaatgg aattgctctc accagaagat ttagtgaatg cgtgcaagat gctggaagca
900
ctgaaattac ctctcaggct ccgtgtgttt gacagtggcg tcatggtaat tgagcttcag
960
tctcacaagg aagaggaaat ggtggcctcg gccctggaga cagtttcaga aaagggatcc
1020
ctaactcag aagagtttgc taagcttgtg ggaatgtctg tcctcctagc caaagaaagg
1080
ttgctgcttg cagagaagat gggccatctt tgccgtgatg actcagtgga aggcctgcgt
1140

```

```

ttttacccaa atttatttat gacacagagc taagggtttt gtattttaaaa tcctttttgt
1200
ccatatgctt gcgtcatgta gaggttgat gacattgagc taagagataa accccgatca
1260
attgagaatt tattggaact tcacagtgc atgtaaatct cttttaattt ctccccaat
1320
atgggtccagg aaattttattt agtatacgca taggaaaatt cagaaaagtg aatgccaaata
1380
tgaatttaaaa atcatgctat agtgcagaac cctcagagtt taacttgga tatagtggat
1440
tttaacttga tcctcaaatac taatcatttt ataaagaagg gaatttagtt ttgcagagaa
1500
taaaaagaga agttgcatgt tcagacaggt tagattatta ttttgggtgta actgaaattc
1560
actgattgca catgacaatg ttgggacaaa atatactgca gcatgctata tgaggctcct
1620
ccccagggtt tttagaagca gtcatagaca tgtcttcaac ataccaaata aaataccttt
1680
aaaaatgaaa taattttatt tgacacatta tttatatata ttctatctag gtttctcttt
1740
gtttttttta aagtgatgat ttcattggact gggcatttaa aagaaatggc aactgtggtc
1800
catttttggg ttttcctaat gctgtggaat ttttgga
1839

```

<210> 5784

<211> 386

<212> PRT

<213> Homo sapiens

<400> 5784

```

Met Asp Arg Phe Val Trp Thr Ser Gly Leu Leu Glu Ile Asn Glu Thr
  1             5             10             15
Leu Val Ile Gln Gln Arg Gly Val Arg Ile Tyr Asp Gly Glu Glu Lys
             20             25             30
Ile Lys Phe Asp Ala Gly Thr Leu Leu Leu Ser Thr His Arg Leu Ile
             35             40             45
Trp Arg Asp Gln Lys Asn His Glu Cys Cys Met Ala Ile Leu Leu Ser
             50             55             60
Gln Ile Val Phe Ile Glu Glu Gln Ala Ala Gly Ile Gly Lys Ser Ala
65             70             75             80
Lys Ile Val Val His Leu His Pro Ala Pro Pro Asn Lys Glu Pro Gly
             85             90             95
Pro Phe Gln Ser Ser Lys Asn Ser Tyr Ile Lys Leu Ser Phe Lys Glu
             100            105            110
His Gly Gln Ile Glu Phe Tyr Arg Arg Leu Ser Glu Glu Met Thr Gln
             115            120            125
Arg Arg Trp Glu Asn Met Pro Val Ser Gln Ser Leu Gln Thr Asn Arg
130            135            140
Gly Pro Gln Pro Gly Arg Ile Arg Ala Val Gly Ile Val Gly Ile Glu
145            150            155            160
Arg Lys Leu Glu Glu Lys Arg Lys Glu Thr Asp Lys Asn Ile Ser Glu
             165            170            175
Ala Phe Glu Asp Leu Ser Lys Leu Met Ile Lys Ala Lys Glu Met Val

```

[illegible]

```
<210> 5785
<211> 785
<212> DNA
<213> Homo sapiens
```

```

<400> 5785
tttttttttt ttttgacagt ttctccactt tattagcctg gagctcctcc ctgccagccc
60
caggggctgg tcgctggtcc ctgggcacag tgagcagggc tgaggtcaga cgggttcggc
120
ccttggccat ggcagcttgg ttgggacagc cgggccaaagg gaaaaaaagg tgcaaaagtc
180
caaatgctgg cacttcaggt gtggccggca cccagccagg cgcagtgggt gggcagggcg
240
ccatgcttct ctctggcgga caggtcggcc gtgtagcagc gccccctccc agcagccact
300
aggaacagct ggtgattctc gccaggaact gctgcgccca ccactcgtct aggtcaatgg
360
gcacaaagtt ctgcagccgg ggattggggg tcctctccac gtactgcaca ggccttggcc
420
cgccctcacc ggctggggca ccatccagct gctgttgcac ctgctgccag gcttcggaca
480
caaagcggac attctccttg tgggccagtg tgtaggtctc ctgggtcccc tggagggatg
540
gggacttgga ggggtcccg cggcgattca cacgattgaa cacaagcctt ggccttgcac
600

```

tcgacagggg ccaggggtccc agcgggtgcg cgagagctgc gcccgtggg gctgcaaggt
 660
 cggcggcgcg ggctgccggc ttttcaggag ctctgggagc tggcccttca cctgctgctg
 720
 cgtgagacct gtgcggctgc gcgaccaatt tgctgggccc gttgatgatg gtgtacatgg
 780
 cgcgc
 785

<210> 5786
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 5786
 Met Tyr Thr Ile Ile Asn Gly Pro Ser Lys Leu Val Ala Gln Pro His
 1 5 10 15
 Arg Ser His Ala Ala Ala Gly Glu Gly Pro Ala Pro Gly Ala Pro Glu
 20 25 30
 Lys Pro Ala Ala Arg Ala Ala Asp Leu Ala Ala Pro Ala Gly Ala Ala
 35 40 45
 Leu Ala Gln Pro Leu Gly Pro Trp Pro Leu Ser Ser Ala Gly Pro Arg
 50 55 60
 Leu Val Phe Asn Arg Val Asn Arg Arg Arg Asp Pro Ser Lys Ser Pro
 65 70 75 80
 Ser Leu Gln Gly Thr Gln Glu Thr Tyr Thr Leu Ala His Lys Glu Asn
 85 90 95
 Val Arg Phe Val Ser Glu Ala Trp Gln Gln Val Gln Gln Gln Leu Asp
 100 105 110
 Gly Gly Pro Ala Gly Glu Gly Gly Pro Arg Pro Val Gln Tyr Val Glu
 115 120 125
 Arg Thr Pro Asn Pro Arg Leu Gln Asn Phe Val Pro Ile Asp Leu Asp
 130 135 140
 Glu Trp Trp Ala Gln Gln Phe Leu Ala Arg Ile Thr Ser Cys Ser
 145 150 155

<210> 5787
 <211> 1683
 <212> DNA
 <213> Homo sapiens

<400> 5787
 nnnngctccag tccagtcgtg cagnngngng ntctttcctc cgctcaagtc caggaacggt
 60
 tccccgggctc ccaccgtctc ggnangccca cnggcctggg ccaaagtccg cgaacggaag
 120
 ccgnggcgag gaggattctg ggagttggag gccgaggctg cgaccngcag gcgcaaacct
 180
 gcccttgggg tgagggctgt aagtggcgcg attcgcgga cgcctccgat ggaacctcct
 240
 ggtcctgtga gggggccctt gcaagattcc agctggtatg agccttctgc agagctagtg
 300
 cagactagga tggctgtatc actaacagca gctgaaactc tggcccttca gggtacacag
 360

ggacaagaga agatgatgat gatgggacca aaggaagagg aacagtcttg tgagtatgag
420
accaggctac ctgggaacca ctctaccagt caagagatct tccgccaacg cttcaggcat
480
ctccgctacc aggagactcc tgggtccccg gaggccttga gccaaactacg agtactctgc
540
tgtgagtggc tgaggccaga gaaacacacg aaggagcaga tcctggagtt cctgggtgctg
600
gaacaattct tgaccatcct gcctgaggag ctccaatcct ggggtgcgggg acatcacccct
660
aagagtggag aggaggctgt gactgtgctg gaggatttag agaaaggact tgaaccagag
720
ccgcaggtcc caggccctgc acatggacct gcacaggaag agccatggga gaagaaggaa
780
tctctgggag cagcccagga agcactgagc atccagctcc agcctaagga gaccagcct
840
ttcccaaaga gtgaacaggc atatttacat tttctgtcag ttgttacaga agatggccca
900
gagcccaagg acaaaggatc attgccacaa ccaccatta ctgaagtga atcacaggcg
960
ttctcagaaa aacttgctac tgacacctct acatttgaag ctacctctga gggtagctta
1020
gaactgcagc agagaaatcc caaagcggag agactgaggt ggtccccctgc ccaggaggaa
1080
agtttcaggc agatggttgt catccataag gaaattccca cagggaagaa agaccatgaa
1140
tgtagtgaat gtggtaaaac cttcatttat aactcacatc ttgttgtcca ccagagagtt
1200
cattctggag agaaacccta taagtgtagt gactgtggga aaactttcaa acagagctca
1260
aacctcggtc agcatcagag aattcataca ggagagaaac ccttcgaatg taatgaatgt
1320
gggaaggcct tcagatgggg tgctcatctt gttcagcatc agaggattca ctcaggagag
1380
aagccctatg agtgtaatga gtgtgggaag gccttttagtc aaagctcata tctaagtcag
1440
catcggagaa ttcacagtgg agagaaacct tttatatgta aagaatgtgg gaaagcttat
1500
ggatggtgct cagagctcat tagacatcgg agagtctcat ccagaaaaga gccttcccat
1560
tgaattgaag gggagaacgt ctccagacag aattctacat cgggtctaac tacttttaga
1620
ctggatccca taaaagttat aagttcctta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1680
aaa
1683

<210> 5788

<211> 417

<212> PRT

<213> Homo sapiens

<400> 5788

Met Ala Val Ser Leu Thr Ala Ala Glu Thr Leu Ala Leu Gln Gly Thr

| | | | |
|---|-----|-----|-----|
| 1 | 5 | 10 | 15 |
| Gln Gly Gln Glu Lys Met Met Met Met Gly Pro Lys Glu Glu Glu Gln | | | |
| | 20 | 25 | 30 |
| Ser Cys Glu Tyr Glu Thr Arg Leu Pro Gly Asn His Ser Thr Ser Gln | | | |
| | 35 | 40 | 45 |
| Glu Ile Phe Arg Gln Arg Phe Arg His Leu Arg Tyr Gln Glu Thr Pro | | | |
| | 50 | 55 | 60 |
| Gly Pro Arg Glu Ala Leu Ser Gln Leu Arg Val Leu Cys Cys Glu Trp | | | |
| 65 | 70 | 75 | 80 |
| Leu Arg Pro Glu Lys His Thr Lys Glu Gln Ile Leu Glu Phe Leu Val | | | |
| | 85 | 90 | 95 |
| Leu Glu Gln Phe Leu Thr Ile Leu Pro Glu Glu Leu Gln Ser Trp Val | | | |
| | 100 | 105 | 110 |
| Arg Gly His His Pro Lys Ser Gly Glu Glu Ala Val Thr Val Leu Glu | | | |
| | 115 | 120 | 125 |
| Asp Leu Glu Lys Gly Leu Glu Pro Glu Pro Gln Val Pro Gly Pro Ala | | | |
| | 130 | 135 | 140 |
| His Gly Pro Ala Gln Glu Glu Pro Trp Glu Lys Lys Glu Ser Leu Gly | | | |
| 145 | 150 | 155 | 160 |
| Ala Ala Gln Glu Ala Leu Ser Ile Gln Leu Gln Pro Lys Glu Thr Gln | | | |
| | 165 | 170 | 175 |
| Pro Phe Pro Lys Ser Glu Gln Val Tyr Leu His Phe Leu Ser Val Val | | | |
| | 180 | 185 | 190 |
| Thr Glu Asp Gly Pro Glu Pro Lys Asp Lys Gly Ser Leu Pro Gln Pro | | | |
| | 195 | 200 | 205 |
| Pro Ile Thr Glu Val Glu Ser Gln Val Phe Ser Glu Lys Leu Ala Thr | | | |
| | 210 | 215 | 220 |
| Asp Thr Ser Thr Phe Glu Ala Thr Ser Glu Gly Thr Leu Glu Leu Gln | | | |
| 225 | 230 | 235 | 240 |
| Gln Arg Asn Pro Lys Ala Glu Arg Leu Arg Trp Ser Pro Ala Gln Glu | | | |
| | 245 | 250 | 255 |
| Glu Ser Phe Arg Gln Met Val Val Ile His Lys Glu Ile Pro Thr Gly | | | |
| | 260 | 265 | 270 |
| Lys Lys Asp His Glu Cys Ser Glu Cys Gly Lys Thr Phe Ile Tyr Asn | | | |
| | 275 | 280 | 285 |
| Ser His Leu Val Val His Gln Arg Val His Ser Gly Glu Lys Pro Tyr | | | |
| | 290 | 295 | 300 |
| Lys Cys Ser Asp Cys Gly Lys Thr Phe Lys Gln Ser Ser Asn Leu Gly | | | |
| 305 | 310 | 315 | 320 |
| Gln His Gln Arg Ile His Thr Gly Glu Lys Pro Phe Glu Cys Asn Glu | | | |
| | 325 | 330 | 335 |
| Cys Gly Lys Ala Phe Arg Trp Gly Ala His Leu Val Gln His Gln Arg | | | |
| | 340 | 345 | 350 |
| Ile His Ser Gly Glu Lys Pro Tyr Glu Cys Asn Glu Cys Gly Lys Ala | | | |
| | 355 | 360 | 365 |
| Phe Ser Gln Ser Ser Tyr Leu Ser Gln His Arg Arg Ile His Ser Gly | | | |
| | 370 | 375 | 380 |
| Glu Lys Pro Phe Ile Cys Lys Glu Cys Gly Lys Ala Tyr Gly Trp Cys | | | |
| 385 | 390 | 395 | 400 |
| Ser Glu Leu Ile Arg His Arg Arg Val His Ala Arg Lys Glu Pro Ser | | | |
| | 405 | 410 | 415 |
| His | | | |

<210> 5789
<211> 1201
<212> DNA
<213> Homo sapiens

<400> 5789
nngcggccgc agcctgagcc agggccccct ccctcgtcag gaccggggca gcaagcaggc
60
cgggggcagg tccgggcacc caccatgcga ggcgagctct ggctcctggt gctggtgctc
120
agggaggctg cccgggcgct gagccccag cccggagcag gtcacgatga gggcccaggc
180
tctggatggg ctgccaaagg gaccgtgcgg ggctggaacc ggagagcccg agagagccct
240
gggcatgtgt cagagccgga caggacccag ctgagccagg acctgggtgg gggcacccctg
300
gccatggaca cgctgccaga taacaggacc aggggtggtgg aggacaacca cagctattat
360
gtgtcccgtc tctatggccc cagcgagccc cacagccggg aactgtgggt agatgtggcc
420
gaggccaacc ggagccaagt gaagatccac acaataactct ccaacaccca ccggcaggct
480
tcgagagtgg tcttgtcctt tgatttccct ttctacgggc atcctctgcg gcagatcacc
540
atagcaactg gaggcttcat cttcatgggg gacgtgatcc atcggatgct cacagctact
600
cagtatgtgg cgcccctgat ggccaacttc aaccctggct actccgacaa ctccacagtt
660
gtttactttg acaatgggac agtctttgtg gttcagtggg accacgttta tctccaaggc
720
tggaagaca agggcagttt caccttccag gcagctctgc accatgacgg ccgcattgtc
780
tttgctata aagagatccc tatgtctgtc ccggaaatca gtcctccca gcatcctgtc
840
aaaaccggcc tatcggtatg cttcatgatt ctcaatccat ccccggtatg gccagaatct
900
cggcgaagga gcatctttga ataccaccgc atagagctgg accccagcaa ggtcaccagc
960
atgtcggccg tggagttcac ccattgccc acctgcctgc agcataggag ctgtgacgcc
1020
tgcatgtcct cagacctgac cttcaactgc agctggtgcc atgtcctcca gagatgctcc
1080
agtggctttg accgctatcg ccaggagtgg atggactatg gctgtgcaca ggaggcagag
1140
ggcaggatgt gcgaggactt ccaggatgag gaccacgact cagcctcccc tgacactttc
1200
t
1201

<210> 5790
<211> 400
<212> PRT
<213> Homo sapiens

<400> 5790

```

Xaa Arg Pro Gln Pro Glu Pro Gly Pro Pro Pro Ser Ser Gly Pro Gly
 1           5           10           15
Gln Gln Ala Gly Arg Gly Gln Val Arg Ala Pro Thr Met Arg Gly Glu
      20           25           30
Leu Trp Leu Leu Val Leu Val Leu Arg Glu Ala Ala Arg Ala Leu Ser
      35           40           45
Pro Gln Pro Gly Ala Gly His Asp Glu Gly Pro Gly Ser Gly Trp Ala
      50           55           60
Ala Lys Gly Thr Val Arg Gly Trp Asn Arg Arg Ala Arg Glu Ser Pro
65           70           75           80
Gly His Val Ser Glu Pro Asp Arg Thr Gln Leu Ser Gln Asp Leu Gly
      85           90           95
Gly Gly Thr Leu Ala Met Asp Thr Leu Pro Asp Asn Arg Thr Arg Val
      100          105          110
Val Glu Asp Asn His Ser Tyr Tyr Val Ser Arg Leu Tyr Gly Pro Ser
      115          120          125
Glu Pro His Ser Arg Glu Leu Trp Val Asp Val Ala Glu Ala Asn Arg
      130          135          140
Ser Gln Val Lys Ile His Thr Ile Leu Ser Asn Thr His Arg Gln Ala
145          150          155          160
Ser Arg Val Val Leu Ser Phe Asp Phe Pro Phe Tyr Gly His Pro Leu
      165          170          175
Arg Gln Ile Thr Ile Ala Thr Gly Gly Phe Ile Phe Met Gly Asp Val
      180          185          190
Ile His Arg Met Leu Thr Ala Thr Gln Tyr Val Ala Pro Leu Met Ala
      195          200          205
Asn Phe Asn Pro Gly Tyr Ser Asp Asn Ser Thr Val Val Tyr Phe Asp
      210          215          220
Asn Gly Thr Val Phe Val Val Gln Trp Asp His Val Tyr Leu Gln Gly
225          230          235          240
Trp Glu Asp Lys Gly Ser Phe Thr Phe Gln Ala Ala Leu His His Asp
      245          250          255
Gly Arg Ile Val Phe Ala Tyr Lys Glu Ile Pro Met Ser Val Pro Glu
      260          265          270
Ile Ser Ser Ser Gln His Pro Val Lys Thr Gly Leu Ser Asp Ala Phe
      275          280          285
Met Ile Leu Asn Pro Ser Pro Asp Val Pro Glu Ser Arg Arg Arg Ser
      290          295          300
Ile Phe Glu Tyr His Arg Ile Glu Leu Asp Pro Ser Lys Val Thr Ser
305          310          315          320
Met Ser Ala Val Glu Phe Thr Pro Leu Pro Thr Cys Leu Gln His Arg
      325          330          335
Ser Cys Asp Ala Cys Met Ser Ser Asp Leu Thr Phe Asn Cys Ser Trp
      340          345          350
Cys His Val Leu Gln Arg Cys Ser Ser Gly Phe Asp Arg Tyr Arg Gln
      355          360          365
Glu Trp Met Asp Tyr Gly Cys Ala Gln Glu Ala Glu Gly Arg Met Cys
      370          375          380
Glu Asp Phe Gln Asp Glu Asp His Asp Ser Ala Ser Pro Asp Thr Phe
385          390          395          400

```

<210> 5791

<211> 3285

<212> DNA

<213> Homo sapiens

<400> 5791

```
ntgtacattg tataaaactga gtagcattga actgcattttt agaagtatgt catcagaaac
60
aaatcacatt atggaaaagga tatacaaatg ccaagtgata tgactctttt ggcatgggtg
120
tagcatggtc cattcagctt tcagaatctt tcggaggctc tagtttggtg cctagtacta
180
gttatttttg ttagaacaat ctctcaaaat ttagataatt ttccagttgt atgtctgtca
240
cttttaactc taaagcgtaa gaatcatggt aaccctctcc tcccccgcc gtccccgcgg
300
ctccatcctc cgccgccgcc cgagcagctg cggggccgcc accgccgccg ccgccgttgc
360
aggctgagtc atcactagag agtgggaagg gcagcagcag cagagaatcc aaaccctaaa
420
gctgatatca caaagtacca tttctccaag ttgggggctc agaggggagt catcatgagc
480
gatgttacca ttgtgaaaga aggttgggtt cagaagaggg gagaatatat aaaaaactgg
540
aggccaagat acttcctttt gaagacagat ggctcattca taggatataa agagaaacct
600
caagatgtgg atttacctta tcccctcaac aacttttcag tggcaaaatg ccagttaatg
660
aaaacagaac gaccaaagcc aaacacattt ataatcagat gtctccagtg gactactgtt
720
atagagagaa catttcatgt agatactcca gaggaaggag aagaatggac agaagctatc
780
caggctgtag cagacagact gcagaggcaa gaagaggaga gaatgaattg tagtccaact
840
tcacaaattg ataatatagg agaggaagag atggatgcct ctacaacca tcataaaaga
900
aagacaatga atgattttga ctatttgaaa ctactaggta aaggcacttt tgggaaagtt
960
attttggttc gagagaaggc aagtggaaaa tactatgcta tgaagattct gaagaaagaa
1020
gtcattattg caaaggatga agtggcacac actctaactg aaagcagagt attaaagaac
1080
actagacatc cctttttaac atccttgaaa tattccttcc agacaaaaga ccgtttgtgt
1140
tttgtgatgg aatatgttaa tgggggagag ctgtttttcc atttgtcgag agagcgggtg
1200
ttctctgagg accgcacacg tttctatggt gcagaaattg tctctgcctt ggactatcta
1260
cattccggaa agatttgtga ccgtgatctc aagttggaga atctaattgt ggacaaagat
1320
ggccacataa aaattacaga ttttggactt tgcaaagaag ggatcacaga tgcagccacc
1380
atgaagacat cctgtggcac tccagaatat ctggcaccag aggtgttaga agataatgac
1440
tatggccgag cagtagactg gtggggccta ggggttgtca tgtatgaaat gatgtgtggg
1500
```

aggttacctt tctacaacca ggaccatgag aaactttttg aattaatatt aatggaagac
1560
attaaatttc ctcgaaact ctcttcagat gcaaaatcat tgctttcagg gctcttgata
1620
aaggatccaa ataaacgcct tgggtggagga ccagatgatg caaaagaaat tatgagacac
1680
agtttcttct ctggagtaaa ctggcaagat gtatatgata aaaagcttgt acctcctttt
1740
aaacctcaag taacatctga gacagatact agatattttg atgaagaatt tacagctcag
1800
actattacaa taacaccacc tgaaaaatat gatgaggatg gtatggactg catggacaat
1860
gagaggcggc cgcatttccc tcaattttcc tactctgcaa gtggacgaga ataagtctct
1920
ttcattctgc tacttcaactg tcattctcaa tttattactg aaaatgattc ctggacatca
1980
ccagtcctag ctcttacaca tagcaggggc accttccgac atcccagacc agccaagggg
2040
cctcaccct cgcacacctt caccctcatg aaaacacaca tacacgcaa tacactccag
2100
tttttgttt tgcataaat tgtatctcag tctaaggctt catgctgttg ctgctactgt
2160
cttactatta tagcaacttt aagaagtaat tttccaacct ttggaagtca tgagcccacc
2220
attgttcatt tgtgcaccaa ttatcatctt ttgatctttt agtttttccc tcagtgaagg
2280
ctaaatgaga tacactgatt ctaggtacat tttttaactt tctagaagag aaaaactaac
2340
tagactaaga agatttagtt tataaattca gaacaagcaa ttgtggaagg gtggtggcgt
2400
gcatatgtaa agcacatcag atccgtgcgt gaagtaggca tatatcacta agctgtggct
2460
ggaattgatt aggaagcatt tggtagaagg actgaacaac tgttgggata tatatatata
2520
tatataattt ttttttttta aattcctggt ggatactgta gaagaagccc atatcacatg
2580
tggatgtcga gacttcacgg gcaatcatga gcaagtgaac actgttctac caagaactga
2640
aggcatatgc acagtcaagg tcacttaaag ggtcttatga aacaatttga gccagagagc
2700
atctttcccc tgtgcttgga aacctttttt ctttcttgac atttatcacc tctgatggct
2760
gaagaatgta gacaggtata atgatactgc ttttcaccaa aatttctaca ccaaggtaaa
2820
caggtgtttg cttatttta ttttttactt tcagttctac gtgaattagc tttttctcag
2880
atgttgaaac tttgaatgtc cttttatgat tttgtttata ttgcagtagt atttattttt
2940
tagtgatgag aattgtatgt catgttagca aacgcagctc caacttatat aaaatagact
3000
tactgcagtt acttttgacc catgtgcaag gattgtacac gttgatgaga atcatgcact
3060
ttttctctc tgttaaaaaa aatgataagg ctctgaaatg gaatatattg gttagaattt
3120

ggctttggga gaagagatgc tgccatttaa ccccttggtgta ctgaaaatga gaaaatcccc
 3180
 aactatgcat gccaaaggggt taatgaaaca aatagctggt gacgtttgct catttaagaa
 3240
 tttgaaacgt tatgatgacc tggcaacaaa aaaaaaaaaa aaaaa
 3285

<210> 5792

<211> 479

<212> PRT

<213> Homo sapiens

<400> 5792

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Asp | Val | Thr | Ile | Val | Lys | Glu | Gly | Trp | Val | Gln | Lys | Arg | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Tyr | Ile | Lys | Asn | Trp | Arg | Pro | Arg | Tyr | Phe | Leu | Leu | Lys | Thr | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Ser | Phe | Ile | Gly | Tyr | Lys | Glu | Lys | Pro | Gln | Asp | Val | Asp | Leu | Pro |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Tyr | Pro | Leu | Asn | Asn | Phe | Ser | Val | Ala | Lys | Cys | Gln | Leu | Met | Lys | Thr |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Arg | Pro | Lys | Pro | Asn | Thr | Phe | Ile | Ile | Arg | Cys | Leu | Gln | Trp | Thr |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Thr | Val | Ile | Glu | Arg | Thr | Phe | His | Val | Asp | Thr | Pro | Glu | Glu | Arg | Glu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Glu | Trp | Thr | Glu | Ala | Ile | Gln | Ala | Val | Ala | Asp | Arg | Leu | Gln | Arg | Gln |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Glu | Glu | Glu | Arg | Met | Asn | Cys | Ser | Pro | Thr | Ser | Gln | Ile | Asp | Asn | Ile |
| | | 115 | | | | 120 | | | | | | 125 | | | |
| Gly | Glu | Glu | Glu | Met | Asp | Ala | Ser | Thr | Thr | His | His | Lys | Arg | Lys | Thr |
| | | 130 | | | | 135 | | | | | 140 | | | | |
| Met | Asn | Asp | Phe | Asp | Tyr | Leu | Lys | Leu | Leu | Gly | Lys | Gly | Thr | Phe | Gly |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Lys | Val | Ile | Leu | Val | Arg | Glu | Lys | Ala | Ser | Gly | Lys | Tyr | Tyr | Ala | Met |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Lys | Ile | Leu | Lys | Lys | Glu | Val | Ile | Ile | Ala | Lys | Asp | Glu | Val | Ala | His |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Thr | Leu | Thr | Glu | Ser | Arg | Val | Leu | Lys | Asn | Thr | Arg | His | Pro | Phe | Leu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Thr | Ser | Leu | Lys | Tyr | Ser | Phe | Gln | Thr | Lys | Asp | Arg | Leu | Cys | Phe | Val |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Met | Glu | Tyr | Val | Asn | Gly | Gly | Glu | Leu | Phe | Phe | His | Leu | Ser | Arg | Glu |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | |
| Arg | Val | Phe | Ser | Glu | Asp | Arg | Thr | Arg | Phe | Tyr | Gly | Ala | Glu | Ile | Val |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Ser | Ala | Leu | Asp | Tyr | Leu | His | Ser | Gly | Lys | Ile | Val | Tyr | Arg | Asp | Leu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Lys | Leu | Glu | Asn | Leu | Met | Leu | Asp | Lys | Asp | Gly | His | Ile | Lys | Ile | Thr |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Asp | Phe | Gly | Leu | Cys | Lys | Glu | Gly | Ile | Thr | Asp | Ala | Ala | Thr | Met | Lys |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Thr | Ser | Cys | Gly | Thr | Pro | Glu | Tyr | Leu | Ala | Pro | Glu | Val | Leu | Glu | Asp |
| 305 | | | | | 310 | | | | | 315 | | | | 320 | |
| Asn | Asp | Tyr | Gly | Arg | Ala | Val | Asp | Trp | Trp | Gly | Leu | Gly | Val | Val | Met |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Tyr | Glu | Met | Met | Cys | Gly | Arg | Leu | Pro | Phe | Tyr | Asn | Gln | Asp | His | Glu |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Lys | Leu | Phe | Glu | Leu | Ile | Leu | Met | Glu | Asp | Ile | Lys | Phe | Pro | Arg | Thr |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Leu | Ser | Ser | Asp | Ala | Lys | Ser | Leu | Leu | Ser | Gly | Leu | Leu | Ile | Lys | Asp |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Pro | Asn | Lys | Arg | Leu | Gly | Gly | Gly | Pro | Asp | Asp | Ala | Lys | Glu | Ile | Met |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Arg | His | Ser | Phe | Phe | Ser | Gly | Val | Asn | Trp | Gln | Asp | Val | Tyr | Asp | Lys |
| | | | 405 | | | | | | 410 | | | | | 415 | |
| Lys | Leu | Val | Pro | Pro | Phe | Lys | Pro | Gln | Val | Thr | Ser | Glu | Thr | Asp | Thr |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Arg | Tyr | Phe | Asp | Glu | Glu | Phe | Thr | Ala | Gln | Thr | Ile | Thr | Ile | Thr | Pro |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Pro | Glu | Lys | Tyr | Asp | Glu | Asp | Gly | Met | Asp | Cys | Met | Asp | Asn | Glu | Arg |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Arg | Pro | His | Phe | Pro | Gln | Phe | Ser | Tyr | Ser | Ala | Ser | Gly | Arg | Glu | |
| 465 | | | | | 470 | | | | | 475 | | | | | |

<210> 5793

<211> 2767

<212> DNA

<213> Homo sapiens

<400> 5793

| | | | | | | |
|-----|------------|-------------|------------|-------------|-------------|------------|
| 60 | aatcggcac | taggggcagc | tgtcggtcg | aaggaaactgg | tctgctcaca | cttgctggct |
| 120 | tgcgcatcag | gactggcttt | atctcctgac | tcacggtgca | aaggtgcaact | ctgcgaacgt |
| 180 | taagtccgtc | cccagcgctt | ggaatcctac | ggccccacaca | gccggatccc | ctcagccttc |
| 240 | caggtcctca | actcccgtgg | acgctgaaca | atggcctcca | tggggctaca | ggtaatgggc |
| 300 | atcgcgctgg | ccgtcctggg | ctggctggcc | gtcatgctgt | gctgcgcgct | gcccattgtg |
| 360 | cgcgtgacgg | ccttcacatc | cagcaacatt | gtcacctcgc | agaccatctg | ggagggccta |
| 420 | tggatgaact | gcgtgggtga | gagcaccggc | cagatgcagt | gcaaggtgta | cgactcgctg |
| 480 | ctggcactgc | cgcaggacct | gcaggcggcc | cgcgcctctg | tcatcatcag | catcatcgct |
| 540 | gctgctcttg | gcgtgctgct | gtccgtggtg | gggggcaagt | gtaccaactg | cctggaggat |
| 600 | gaaagcgcca | aggccaagac | catgatcgct | gcgggctgtg | tgttcctggt | ggccggcctt |
| 660 | atggtgatag | tgccggtgtc | ctggacggcc | cacaacatca | tccaagactt | ctacaatccg |
| 720 | ctggtggcct | ccgggcagaa | gcgggagatg | ggtgcctcgc | tctacgtcgg | ctgggcccgc |
| 780 | tccggcctgc | tgtcctcttg | cggggggctg | ctttgctgca | actgtccacc | ccgcacagac |
| 840 | aagccttact | ccgccaaagta | ttctgctgcc | cgctctgctg | ctgccagcaa | ctacgtgtaa |

ggtgccacgg ctccactctg ttctctctctg ctttgttctt ccctggactg agctcagcgc
900
aggctgtgac cccaggaggg ccctgccacg ggccactggc tgctggggac tggggactgg
960
gcagagactg agccaggcag gaaggcagca gccttcagcc tctctggccc actcggacaa
1020
cttcccaagg ccgcctcctg ctagcaagaa cagagtccac cctcctctgg atattgggga
1080
gggacggaag tgacaggggtg tgggtgggtgga gtggggagct ggcttctgct ggccaggata
1140
gcttaacct gactttggga tctgcctgca tcggcggttg ccactgtccc catttacatt
1200
ttccccactc tgtctgcctg catctcctct gtcccggtga ggcttgata tcacctctgg
1260
gactgtgctt tgctcacgga aaccgcgcgc caggagtatg gctgaggcct tgcccaccca
1320
cctgcctggg aagtgcagag tggatggacg ggttttagagg ggaggggcca aggtgctgta
1380
aacaggtttg ggcagtggtg ggggaggggg ccagagaggc ggctcaggtt gccagctct
1440
gtggcctcag gactctctgc ctcaccgcct tcagcccagg gccctggag actgatcccc
1500
tctgagtcct ctgccccttc caaggacact aatgagcctg ggaggggtggc agggaggagg
1560
ggacagcttc acccttgga gtcctgggggt ttttctctt ccttctttgt ggtttctggt
1620
ttgtaattta agaagagcta ttcactctg taattattat tattttctac aataaatggg
1680
acctgtgcac aggaggaaaa aaaaaaaaaa aaaaggagac cacagcctgc caaggagca
1740
gctgccccaa tgtttcctga ccggtgacct agagatgaag taatttgatt tattccctat
1800
ttcctttagt ctcaatggct aaggggtaat ggatggaaat ggggagaatg accgagtaga
1860
ggcaaggacg aagctcattc ttaaagaaaa acctcaaagt tcaacttcaa acagctgaaa
1920
tttgtttcat agctgttggt caccagttc tagccaacca ggaataaatt atagttttgc
1980
cacctcagca gatggcaaaa ggagctttcc agaactttgg cctgggtctgc accagggtacc
2040
aacatcacag ctgctaaaat caccagaagg gatttttgga ccgctgtact agtgtccttt
2100
cattcgatgg gatgtccagg cttcacccca aagaggcttc atttatgctt cttctcctgt
2160
gtgctgggtg accaagagtc taggagcttc ttgctgtagt acaactgcca ggcagtcact
2220
tgactgcca acaccaacac caggtacatg atggaaacgg cagaaaaacc aaagaggaaa
2280
cggtaggcct tgccatggcg gtagagctgc tgtgcagcag ggaacatctc catgctgcca
2340
taaagagtg gagcgatgga aaagagtccc atgctgatca tggagagcac caggtagcta
2400
atgttggtgc ggggaaagga gagaaggccc aagagagagg gcaaaatgct cagcaaatac
2460

ggggtattccc actgataggg catggccacc tgatcatgtg acaagagcct caggtgtccc
 2520
 acgctcatct tagcaaccag cagcagccat atgaccagat gtacgtagat cagcttcttg
 2580
 atttcatact tgagggtcac actcatctgg tagtgcattg cgacgcgctc ccggtgctga
 2640
 aagtcgctgc cgtcgggtgcc ggccgctcgc gggcctgctc gagacgccat tgtgcctgcc
 2700
 cagaaccccc gaaccctca cgcgacctg gtaccgcaac gacagccaag cggcccagtg
 2760
 accctat
 2767

<210> 5794

<211> 209

<212> PRT

<213> Homo sapiens

<400> 5794

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Ser | Met | Gly | Leu | Gln | Val | Met | Gly | Ile | Ala | Leu | Ala | Val | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Trp | Leu | Ala | Val | Met | Leu | Cys | Cys | Ala | Leu | Pro | Met | Trp | Arg | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Ala | Phe | Ile | Gly | Ser | Asn | Ile | Val | Thr | Ser | Gln | Thr | Ile | Trp | Glu |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Gly | Leu | Trp | Met | Asn | Cys | Val | Val | Gln | Ser | Thr | Gly | Gln | Met | Gln | Cys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Lys | Val | Tyr | Asp | Ser | Leu | Leu | Ala | Leu | Pro | Gln | Asp | Leu | Gln | Ala | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Arg | Ala | Leu | Val | Ile | Ile | Ser | Ile | Ile | Val | Ala | Ala | Leu | Gly | Val | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Ser | Val | Val | Gly | Gly | Lys | Cys | Thr | Asn | Cys | Leu | Glu | Asp | Glu | Ser |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ala | Lys | Ala | Lys | Thr | Met | Ile | Val | Ala | Gly | Val | Val | Phe | Leu | Leu | Ala |
| | | 115 | | | | 120 | | | | | | 125 | | | |
| Gly | Leu | Met | Val | Ile | Val | Pro | Val | Ser | Trp | Thr | Ala | His | Asn | Ile | Ile |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Gln | Asp | Phe | Tyr | Asn | Pro | Leu | Val | Ala | Ser | Gly | Gln | Lys | Arg | Glu | Met |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Gly | Ala | Ser | Leu | Tyr | Val | Gly | Trp | Ala | Ala | Ser | Gly | Leu | Leu | Leu | Leu |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Gly | Gly | Gly | Leu | Leu | Cys | Cys | Asn | Cys | Pro | Pro | Arg | Thr | Asp | Lys | Pro |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Tyr | Ser | Ala | Lys | Tyr | Ser | Ala | Ala | Arg | Ser | Ala | Ala | Ala | Ser | Asn | Tyr |
| | | 195 | | | | | 200 | | | | | 205 | | | |

Val

<210> 5795

<211> 993

<212> DNA

<213> Homo sapiens

<400> 5795

ccacatacaa agaggaaaga tgaaactttt attgttacat ttattgacac tggatattta
 60
 ttatctgtta tataaccaggc aaaatggaca caccatcagg agataagacc tgtatcttac
 120
 gtgtaagatg aaacttatat ttattgattg aattattgaa tactttttga gtatttgcta
 180
 tataaccaggc aaaaggcaca gaacaaatta tttgttcaca gttactttta actctttcag
 240
 caatgcctga gtcctcttta tagaaacttc attttgctaa gttagcaacc attcattttt
 300
 ttggttactc ttcattgtata gttttctcaa gtgtctcttc aaatactgca taatggata
 360
 gaccatttaa tattccaaac ataacttgaa agactagagg aatcgccatt aatttcattt
 420
 gtgtttgaca aagcgtcatc caatggatta aaacccttcc ttttggtggc agtggaaagg
 480
 tatgatactt ggttgccagg cgtccatttt tagtaaaagc caaagaactg ggatagaaaa
 540
 caccacaaac tatgccaatc agtgagcttc tgaaaacaca gttttccttg cttatattat
 600
 ctgaatacaa agcatcaatt acaaaaagct tgtcagtaac aacagtagac aaaaatggaa
 660
 gtgtagccaa tgatgcatat gtcttcaaag catcatgttt aacctgaag cagcgtctga
 720
 acaggaagtt tgagaatatt ccagagaaac cagctgttgt tccaaatgtc gccatttgat
 780
 atatattttg tgtcattttc tttctaagat agtcaaaatt tttttctatg atttctatga
 840
 ccattggctc tctgagtttt gcatcttcta gagaaggact gggctgacca tgcatagatg
 900
 ctgccatctt gaaaaccttg ggcgttctc cagttccac cggcaccaca cctgaatccc
 960
 ttggcttagt ccagcctca taccgaaca cca
 993

<210> 5796

<211> 200

<212> PRT

<213> Homo sapiens

<400> 5796

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Ala | Ser | Met | His | Gly | Gln | Pro | Ser | Pro | Ser | Leu | Glu | Asp | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Lys | Leu | Arg | Arg | Pro | Met | Val | Ile | Glu | Ile | Ile | Glu | Lys | Asn | Phe | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Tyr | Leu | Arg | Lys | Glu | Met | Thr | Gln | Asn | Ile | Tyr | Gln | Met | Ala | Thr | Phe |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Gly | Thr | Thr | Ala | Gly | Phe | Ser | Gly | Ile | Phe | Ser | Asn | Phe | Leu | Phe | Arg |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Arg | Cys | Phe | Lys | Val | Lys | His | Asp | Ala | Leu | Lys | Thr | Tyr | Ala | Ser | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ala | Thr | Leu | Pro | Phe | Leu | Ser | Thr | Val | Val | Thr | Asp | Lys | Leu | Phe | Val |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Ile | Asp | Ala | Leu | Tyr | Ser | Asp | Asn | Ile | Ser | Lys | Glu | Asn | Cys | Val | Phe |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| | | | 100 | | | | | 105 | | | | | 110 | | | | |
| Arg | Ser | Ser | Leu | Ile | Gly | Ile | Val | Cys | Gly | Val | Phe | Tyr | Pro | Ser | Ser | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | |
| Leu | Ala | Phe | Thr | Lys | Asn | Gly | Arg | Leu | Ala | Thr | Lys | Tyr | His | Thr | Val | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | |
| Pro | Leu | Pro | Pro | Lys | Gly | Arg | Val | Leu | Ile | His | Trp | Met | Thr | Leu | Cys | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | |
| Gln | Thr | Gln | Met | Lys | Leu | Met | Ala | Ile | Pro | Leu | Val | Phe | Gln | Ile | Met | | |
| | | | 165 | | | | | 170 | | | | | 175 | | | | |
| Phe | Gly | Ile | Leu | Asn | Gly | Leu | Tyr | His | Tyr | Ala | Val | Phe | Glu | Glu | Thr | | |
| | | 180 | | | | | 185 | | | | | | 190 | | | | |
| Leu | Glu | Lys | Thr | Ile | His | Glu | Glu | | | | | | | | | | |
| | | 195 | | | | | 200 | | | | | | | | | | |

<210> 5797

<211> 405

<212> DNA

<213> Homo sapiens

<400> 5797

```

ctcagatcaa taccccgact ggccagtcga gggaactgct gagagcggct tgcgtgtgtc
60
gaggagcaga aagaggatgg ccctcactcc agctcctgca ctgccagcag cccaccctgc
120
ttctctcctg ccagcagcca aaagcaggca actgccggac agtcctaacc caaggcgggt
180
agaagggagc agagaccagg cctggcccct tcagactttc tcacagagaa attacagatc
240
tctaagcctc tattgttggc tggcgagggg gggaagaaca tcaagttatc agggaaatca
300
aggatccctc cgcccccgcc ctgaaccagc aggtccggaa gggagcaagc ggtcagggag
360
gccagtgcct tgcgggaacc ccagcctcat gaccaacctc ggccg
405

```

<210> 5798

<211> 109

<212> PRT

<213> Homo sapiens

<400> 5798

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Met | Ala | Leu | Thr | Pro | Ala | Pro | Ala | Leu | Pro | Ala | Ala | His | Pro | Ala | Ser | | |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | | | |
| Leu | Leu | Pro | Ala | Ala | Lys | Ser | Arg | Gln | Leu | Pro | Asp | Ser | Pro | Asn | Pro | | |
| | | 20 | | | | | | 25 | | | | 30 | | | | | |
| Arg | Arg | Val | Glu | Gly | Ser | Arg | Asp | Gln | Ala | Trp | Pro | Leu | Gln | Thr | Phe | | |
| | | 35 | | | | | 40 | | | | | 45 | | | | | |
| Ser | Gln | Arg | Asn | Tyr | Arg | Ser | Leu | Ser | Leu | Tyr | Cys | Trp | Leu | Ala | Arg | | |
| | 50 | | | | | 55 | | | | | 60 | | | | | | |
| Glu | Gly | Arg | Thr | Ser | Ser | Tyr | Gln | Gly | Asn | Gln | Gly | Ser | Leu | Arg | Pro | | |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | | | |
| Arg | Pro | Glu | Pro | Arg | Gly | Pro | Glu | Gly | Ser | Lys | Arg | Ser | Gly | Arg | Pro | | |
| | | | 85 | | | | 90 | | | | | | 95 | | | | |
| Val | Pro | Cys | Gly | Asn | Pro | Ser | Leu | Met | Thr | Asn | Leu | Gly | | | | | |

100

105

<210> 5799

<211> 4261

<212> DNA

<213> Homo sapiens

<400> 5799

agtgggtgga gaagccactc tcccgaaacc agagggatgg ggccggctgt gcagtagaac
60
ggggatcgaa aagaggaaaa caagggcacg aagaccagcg agaaagaaga ggacacctgg
120
gaaaggcgga agcagaagac ggggaaggga aaagaaaccc atagcagggtg gaaaccagat
180
ctagagcaac accgtcagggt tcacagtttg tttttctaga agagaagaaa gtacctgagg
240
attgctcttt tttcctaccg ttaatgaaaa ctacttttgt cttcatcata aaagaaaaaa
300
ctaaggggag gtaaaggcag tctcctgttt tattaggggg agagggtgaag ggaaatccag
360
gtcactttc tgaataagcc actgcctgggt gcacagagca gaaccatcct ggtttctgaa
420
gacacatccc tttcagcaga attccagccg gagtcgctgg cacagttcta tttttatatt
480
taaagtgtatg tctcccctgg cttttttttt tttttttttt ttttttttagc aacacttttc
540
ttgtttgtaa acgcgagtga ccagaaagtg tgaatgcgga gtaggaatat ttttcgtgtt
600
ctcttttatc tgcttgccct ttttagagag tagcagtgggt tcctatttcg gaaaaggacg
660
ttctaattca aagctctctc ccaatatatt tacacgaata cgcattttaga aaggagggca
720
gcttttgagg ttgcaatcct actgagaagg atggaagaag gagccaggca ccgaaacaac
780
accgaaaaga aacacccagg tgggggagag tcggacgcca gccccaggc tggttccgga
840
gggggagcgg tagccctgaa gaaagagatc ggatttgtca gtgcctgtgg tatcatcgta
900
gggaacatca tcggctctgg aatctttgtc tcgccaaagg gaggctgga gaatgctgggt
960
tctgtgggcc ttgctctcat cgtctggatt gtgacgggct tcatcacagt tgtgggagcc
1020
ctctgctatg ctgaactcgg ggtcaccatc cccaaatctg gaggtgacta ctctatgtc
1080
aaggacatct tcggaggact ggctgggttc ctgaggctgt ggattgctgt gctggtgatc
1140
taccacacca accaggtgt catcgccctc accttctcca actacgtgct gcagccgctc
1200
ttccccacct gcttcccccc agagtctggc cttcggctcc tggctgcat ctgcttattg
1260
ctcctcatat ggggtcaactg ttccagtgtg cgggtggcca cccgggttca agacatcttc
1320
acagctggga agctcctggc cttggccctg attatcatca tggggattgt acagatatgc
1380

aaaggagagt acttctggct ggagccaaag aatgcatttg agaatttcca ggaacctgac
1440
atcggcctcg tcgcactggc tttccttcag ggctcctttg cctatggagg ctggaacttt
1500
ctgaattacg tgactgagga gcttgttgat ccctacaaga accttcccag agccatcttc
1560
atctccatcc cactggtcac atttgtgtat gtcttttgcca atgtcgctta tgtcactgca
1620
atgtcccccc aggagctgct ggcatccaac gccgtcgctg tgacttttgg agagaagctc
1680
ctaggagtca tggcctggat catgcccatt tctgttgccc tgtccacatt tggaggagtt
1740
aatgggtctc tcttcacctc ctctcggctg ttcttcgctg gagcccgaga gggccacctt
1800
cccagtgtgt tggccatgat ccacgtgaag cgctgcaccc caatcccagc cctgctcttc
1860
acatgcatct ccacctgct gatgctggtc accagcgaca tgtacacact catcaactac
1920
gtgggcttca tcaactacct cttctatggg gtcacggttg ctggacagat agtccttcgc
1980
tggaagaagc ctgatatccc ccgccccatc aagatcaacc tgctgttccc catcatctac
2040
ttgctgttct gggccttcct gctggctctc agcctgtggg cagagccggg ggtgtgtggc
2100
attggcctgg ccatcatgct gacaggagtg cctgtctatt tcctgggtgt ttactggcaa
2160
cacaagccca agtgtttcag tgacttcatt gagctgctaa ccctgggtgag ccagaagatg
2220
tgtgtggtcg tgtaccccga ggtggagcgg ggctcgggga cagaggaggc taatgaggac
2280
atggaggagc agcagcagcc catgtaccaa cccactccca cgaaggacaa ggacgtggcg
2340
gggcagcccc agccctgagg accaccattc cctggctact ctctccttcc tccccctttt
2400
atcctacctc cctgccttgg tcccgccaac acatgcgagt acacacacac ccctctctct
2460
gcttttgtca ggcagtggta ggactttggg gtgggtgggt agaaattgta aaaaaaact
2520
gacattcata ccaaagaac cagcctctca cccaggggc catgtcccag gccccactcc
2580
agtgtgccc acactcccag ctgctggagg agaggggaga tgccaagggt cctgcagga
2640
cctccctccg ggccacaccc tcagctgcct cttcaggaac cggagctcat tactgccttc
2700
cctcccaggg agggcccttc agagaggaga ggccacagga gctgcattgt ggggggacag
2760
gctcaagcaa ttctgtcccc atcaaggggt cagctggaga gaccaagac cctatctgtt
2820
caccagggac caaaaatcca aggggatgct tccctctgcc ctctttcctg cccctcccca
2880
tcatacctgc acccacccca gccagggtc cctgtccaga attcggttct cctcaggacg
2940
ccaactccca gagctaagga ccaaggagaa gaacagcctc tccaccccca agccaggcgg
3000

ttgaggaaca tattgagaaa ggttcagatt gcagaaaccc agccctgccc ctgcctcctg
 3060
 catccagccc ccaacatggt gccaaagctt ccagaagcca aaaagcttct gatttttaag
 3120
 gtagtgggca tctctctcct aatgacgaag ctgctcagca actccacctg cccgccgcag
 3180
 gaaggagcag tccctgcta tccctgcagc cactcccagc acaccgcac acagccagca
 3240
 ccaccgcccc caccgtgcac ttctcctctc tgggccttgg cttgggacca ggtacgaagg
 3300
 atccccaagc ccttcaggcc tgagatcaga gccagatcag ccttaagtca cctcccatcc
 3360
 aagaacttgg cctaaaaata ctccctatt tctaaccctc aggacggatc tgatattaaa
 3420
 tgccttcctt gggaggaagg gtgctttccc cctccctaga ggtgcccatt ccataccctg
 3480
 ggagactgag gagagcattg gctgaagccc agttccttcc ccatccatcc ccaactccaa
 3540
 taatcccccac ctctcgcag gtctcagtgt catgctgtct tggggcaggg tgaaagggta
 3600
 gtggcagcag ggcgcccact ctggagatcc tcaaaaaagg cctcctctg tggctggcag
 3660
 cctctgacct ttccctgggc ttcaaaggaa ggctatggag tttgctgtgg gccctgcaac
 3720
 cttcccagcc actcctgctg cactaaggac ttaggatcct tttatcacia atcgggattc
 3780
 tctccccac ccgaattct gtctgcttaa actggaatac acaggagccc ttcttggcct
 3840
 ggatggtgtc tcccagcttc ccgcccagc ttgcccaccc catagttggt gagatgccaa
 3900
 gtttggtctg agttgtgacc ccttcagagt agatgcccg caggctgggg ttggcccctg
 3960
 gagggtcagg ggaccatctt cttattccct cttttctcat tcctccaact tcctcccctc
 4020
 cttcaattat ttttttgtaa agttgatgcc ttactttttg gataaatatt tttgaagctg
 4080
 gtatttctat ttcttttga ttttttttaa tgtaagggtg ttttggggga tggagttaga
 4140
 acctaatga taatttcttt cgtttggtgt aggtttttaga gatttgtttt gtggagaggt
 4200
 ttttttcttt tgatgtaata aaattttaaaa tggaaatgaa aaaaaaaaaa aaaaaaaaaa
 4260
 a
 4261

<210> 5800

<211> 535

<212> PRT

<213> Homo sapiens

<400> 5800

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Glu | Gly | Ala | Arg | His | Arg | Asn | Asn | Thr | Glu | Lys | Lys | His | Pro |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Gly | Gly | Gly | Glu | Ser | Asp | Ala | Ser | Pro | Glu | Ala | Gly | Ser | Gly | Gly | Gly |

4965

| | | | | |
|---|---|-----|-----|-----|
| 450 | | 455 | | 460 |
| Leu Gly Val Tyr Trp | Gln His Lys Pro Lys Cys Phe Ser Asp Phe Ile | | | |
| 465 | 470 | 475 | 480 | |
| Glu Leu Leu Thr Leu Val Ser Gln Lys Met Cys Val Val Val Tyr Pro | | | | |
| | 485 | 490 | 495 | |
| Glu Val Glu Arg Gly Ser Gly Thr Glu Glu Ala Asn Glu Asp Met Glu | | | | |
| | 500 | 505 | 510 | |
| Glu Gln Gln Gln Pro Met Tyr Gln Pro Thr Pro Thr Lys Asp Lys Asp | | | | |
| | 515 | 520 | 525 | |
| Val Ala Gly Gln Pro Gln Pro | | | | |
| 530 | 535 | | | |

<210> 5801

<211> 2418

<212> DNA

<213> Homo sapiens

<400> 5801

```

nntccggaag tgctcagtca tgttcatagc aactcctaga gggcagagat ttcattctgct
60
ctgcccaccg ctatatagcc agccactaga acaggccgga agcgcagaaa gagctaagat
120
cccacctcag acgacgtcat ggactcgttc ctggaaaagt tccagagcca gccttaccgt
180
ggcgggctttc atgaggacca gtgggagaag gaatttgaaa aggtccccct atttatgtcg
240
agagcgccat cagaaattga tcccaggag aatcctgact tggcttgtct ccagtcaatt
300
atTTTTgatg aggagcgttc tccagaagaa caggccaaga cctataaaga tgagggcaat
360
gattacttta aagaaaaaga ctacaagaaa gctgtaattt catacactga aggcttaaag
420
aagaaatgtg cagatcctga tttgaatgct gtcctttata ccaaccgggc agcagcacag
480
tactatctgg gcaattttcg ttctgctctc aatgatgtga cagctgccag aaagctaaaa
540
ccctgccacc tcaaagcaat aataagaggt gccttatgcc atctggaact gaaacacttt
600
gccgaggccg tgaactggtg tgatgagggg ctgcaaatag atgccaaga gaagaagctt
660
ctggaaatga gggctaaagc agacaagctg aagcgaattg aacagaggga tgtgaggaaa
720
gccaaattga aagaaaagaa ggagaggaat cagaatgagg ctttactcca ggccatcaag
780
gctaggaata tcaggctctc agaagctgcc tgtgaggatg aagattcagc ctcagaaggt
840
ctaggtgagc ttttcttgga tggactcagc actgagaacc cccatggagc caggctgagt
900
ctagatggcc agggcaggct gagctggcct gtgctctttc tgtaccaga gtatgccag
960
tcggaactca tctctgcttt tcatgaggac tccaggttta ttgatcatct aatggtgatg
1020
tttggtgaaa caccctcttg ggacctagag caaaaatatt gcctgataat ttggaggtct
1080

```

actttgagga tgaggacagg gcagaactat accgggtgcc tgccaagagc accttgctac
 1140
 aggtttctaca gcaccagagg tactttgtaa aagccctgac accagcattt ttggtctgtg
 1200
 taggatcctc tcctttttgc aagaattttc tccgggggag aaaggtgtac cagatacgat
 1260
 gactaagcca gggcccctgg atctcctccc ttaccctcct ctgctgggaa cctagcacac
 1320
 ctgaatcagc tggacatact gctggagtcc agtgctttct ttccgtcacc ctggggatag
 1380
 tccttcctgg catcgtggtg ggggaggagc ctctggcttc cctaaactgc agcctctctg
 1440
 gctggtcttc actttcctca gttgatataa aactctgggt cttggccatg atgtccttgg
 1500
 actccatcgc taaagggacc atctgctgca gttaccacag caactgacct gagcggcacc
 1560
 ctggtctgtg gagatggact caggatccag tgacatgatt ctgaactttt gtggagtttg
 1620
 acaccttaga gaagctaccc ctcaaactgc acatctacac acaacaaac aatgcatagg
 1680
 attccaaggc tttaaagctg agagaccctg gcctcaagtt atttcatgcy cacagagggg
 1740
 agccatgtgg ggttgctgaa gatgccttga ggtgaaatgg gggcaggaaa gccacatctt
 1800
 gctctgcatt tataaagacc gtacaaactg agatccttgg taccctaaa aagattgcc
 1860
 attttcttca tctttgccat atggaggact gtgacagact ttggacagtg gcctcttgag
 1920
 ttctctgca gttttgacat ttaggatttt gtgtctttta aactggaaaa tcttctagca
 1980
 tggtgggttg ttacagagta tatttttgtc tgcagctggt tggtgccccca ttctaagag
 2040
 gagtttatcc atcctgactt gtagctgtgt gacttcttgc agtgccccca ccccatacc
 2100
 cccgggagag tgtacttccc tgctcccaat gcagagggat atgcacaggc atgagctgtc
 2160
 ctgcgtctga cagaagcctg aagagtcatg tgtggttggc ctgtgctctt ccctctgctg
 2220
 tgagaacaca tttcccacag aggagccgtt ccatggagcc gagctacagc agctggcctg
 2280
 cagccactga gtgtcacagc aatgagagag caatgtttgc tgtagtaagc agtgagattt
 2340
 aggggttggg tggttactata gcagagctaa tacatgagta aactgaaaaa aaaaaaaaaa
 2400
 aaaaaaaaaa aaaaaaaaaa
 2418

<210> 5802

<211> 350

<212> PRT

<213> Homo sapiens

<400> 5802

Asp Pro Thr Ser Asp Asp Val Met Asp Ser Phe Leu Glu Lys Phe Gln

| | | | |
|---|-----|-----|-----|
| 1 | 5 | 10 | 15 |
| Ser Gln Pro Tyr Arg Gly Gly Phe His Glu Asp Gln Trp Glu Lys Glu | | | |
| | 20 | 25 | 30 |
| Phe Glu Lys Val Pro Leu Phe Met Ser Arg Ala Pro Ser Glu Ile Asp | | | |
| | 35 | 40 | 45 |
| Pro Arg Glu Asn Pro Asp Leu Ala Cys Leu Gln Ser Ile Ile Phe Asp | | | |
| | 50 | 55 | 60 |
| Glu Glu Arg Ser Pro Glu Glu Gln Ala Lys Thr Tyr Lys Asp Glu Gly | | | |
| 65 | 70 | 75 | 80 |
| Asn Asp Tyr Phe Lys Glu Lys Asp Tyr Lys Lys Ala Val Ile Ser Tyr | | | |
| | 85 | 90 | 95 |
| Thr Glu Gly Leu Lys Lys Lys Cys Ala Asp Pro Asp Leu Asn Ala Val | | | |
| | 100 | 105 | 110 |
| Leu Tyr Thr Asn Arg Ala Ala Ala Gln Tyr Tyr Leu Gly Asn Phe Arg | | | |
| | 115 | 120 | 125 |
| Ser Ala Leu Asn Asp Val Thr Ala Ala Arg Lys Leu Lys Pro Cys His | | | |
| | 130 | 135 | 140 |
| Leu Lys Ala Ile Ile Arg Gly Ala Leu Cys His Leu Glu Leu Lys His | | | |
| 145 | 150 | 155 | 160 |
| Phe Ala Glu Ala Val Asn Trp Cys Asp Glu Gly Leu Gln Ile Asp Ala | | | |
| | 165 | 170 | 175 |
| Lys Glu Lys Lys Leu Leu Glu Met Arg Ala Lys Ala Asp Lys Leu Lys | | | |
| | 180 | 185 | 190 |
| Arg Ile Glu Gln Arg Asp Val Arg Lys Ala Asn Leu Lys Glu Lys Lys | | | |
| | 195 | 200 | 205 |
| Glu Arg Asn Gln Asn Glu Ala Leu Leu Gln Ala Ile Lys Ala Arg Asn | | | |
| | 210 | 215 | 220 |
| Ile Arg Leu Ser Glu Ala Ala Cys Glu Asp Glu Asp Ser Ala Ser Glu | | | |
| 225 | 230 | 235 | 240 |
| Gly Leu Gly Glu Leu Phe Leu Asp Gly Leu Ser Thr Glu Asn Pro His | | | |
| | 245 | 250 | 255 |
| Gly Ala Arg Leu Ser Leu Asp Gly Gln Gly Arg Leu Ser Trp Pro Val | | | |
| | 260 | 265 | 270 |
| Leu Phe Leu Tyr Pro Glu Tyr Ala Gln Ser Asp Phe Ile Ser Ala Phe | | | |
| | 275 | 280 | 285 |
| His Glu Asp Ser Arg Phe Ile Asp His Leu Met Val Met Phe Gly Glu | | | |
| | 290 | 295 | 300 |
| Thr Pro Ser Trp Asp Leu Glu Gln Lys Tyr Cys Leu Ile Ile Trp Arg | | | |
| 305 | 310 | 315 | 320 |
| Ser Thr Leu Arg Met Arg Thr Gly Gln Asn Tyr Thr Gly Cys Leu Pro | | | |
| | 325 | 330 | 335 |
| Arg Ala Pro Cys Tyr Arg Phe Tyr Ser Thr Arg Gly Thr Leu | | | |
| | 340 | 345 | 350 |

<210> 5803

<211> 692

<212> DNA

<213> Homo sapiens

<400> 5803

nacgcgtgaa ggggacgccg ggaacaggaa tttcttcaca tggctcctgg agaagtgacc
60

atcacagttc gcctcatccg ttccttttgaa catcgcaatt tcaaacctgt agtgtatcac
120

ggagtgaatt tggaccaaac tgtaaaggaa tttatcgtat ttctaaagca agatgtccct
 180
 ttaaggacca acctgccacc accattcaga aattataaat atgatgcact aaagattatt
 240
 catcaagcac ataaatcaaa gacaaatgaa cttgtgttga gtttggaaga tgacgaaaga
 300
 ctcttgctga aagaagacag cactctgaaa gcagctggaa tcgccagtga aactgaaatt
 360
 gcattcttct gtgaagaaga ttataggaac tacaaagcta atcccatttc atcctgggtga
 420
 aaacatctcg agggcttcct ttttgcatat ctgtattaag ctctttattc cactgctgag
 480
 tttttgaaat tgacaaacaa atcttaaaaa attaataccca ggctatactc tttgagctaa
 540
 aatctgggtta tttctttctc ttcaggtctt tctttccttc tctctttctt tttctttggt
 600
 gttgtaaaat aatatattat gagaaaaaca tttgatcttt ttaaagggaa ataaattggt
 660
 attaaaaatt aaaaaaaaaa aaaaaaaaaa aa
 692

<210> 5804

<211> 126

<212> PRT

<213> Homo sapiens

<400> 5804

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Pro | Gly | Glu | Val | Thr | Ile | Thr | Val | Arg | Leu | Ile | Arg | Ser | Phe |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | His | Arg | Asn | Phe | Lys | Pro | Val | Val | Tyr | His | Gly | Val | Asn | Leu | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Thr | Val | Lys | Glu | Phe | Ile | Val | Phe | Leu | Lys | Gln | Asp | Val | Pro | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | Thr | Asn | Leu | Pro | Pro | Pro | Phe | Arg | Asn | Tyr | Lys | Tyr | Asp | Ala | Leu |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Lys | Ile | Ile | His | Gln | Ala | His | Lys | Ser | Lys | Thr | Asn | Glu | Leu | Val | Leu |
| 65 | | | | 70 | | | | | | 75 | | | | 80 | |
| Ser | Leu | Glu | Asp | Asp | Glu | Arg | Leu | Leu | Leu | Lys | Glu | Asp | Ser | Thr | Leu |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Lys | Ala | Ala | Gly | Ile | Ala | Ser | Glu | Thr | Glu | Ile | Ala | Phe | Phe | Cys | Glu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Glu | Asp | Tyr | Arg | Asn | Tyr | Lys | Ala | Asn | Pro | Ile | Ser | Ser | Trp | | |
| | | 115 | | | | | 120 | | | | | 125 | | | |

<210> 5805

<211> 1112

<212> DNA

<213> Homo sapiens

<400> 5805

nntccggagc tccccgctct ccacctcccc ttctgtgggt tccaccacta tggagggcag
 60
 acggtccttc agtttgcagc agcgggtcaaa atctgacggg tctgggaaga tctggtagga
 120

aaggccatcc ttgcgggggc tgaggccgat ctctccatg ggctgagtgc tcagtggaga
180
gcggggagtt gtgtccacct tgccgacgtc gctagccgtg gggctgtcct gggaaggcgg
240
acggcgagcg cccggtgtcc gcaactcggcc gcctgccgtg cccgtctgcg cccgtgtcat
300
cctcactcgg gacgcagggg ccgttttttaa atcacagggg cgtgtgtcag cctgccttag
360
gacttcatgt ctatatatct cccattcac tgccccgact atctgagatc ggccaagatg
420
actgaggtga tgatgaacac ccagcccatg gaggagatcg gcctcagccc ccgcaaggat
480
ggcctttcct accagatctt ccagacccg tcagattttg accgctgctg caaactgaag
540
gaccgtctgc cctccatagt ggtggaaccc acagaagggg aggtggagag cggggagctc
600
cgggtggcccc ctgaggagtt cctggtccag gaggatgagc aagataactg cgaagagaca
660
gcgaaagaaa ataaagagca gtagagtccc tgtggactcc catgggtcat accagccagc
720
atctgttctt gaactgtgtt tttcccatca tgacggaaga agagagttag ccgcaattgt
780
tctgaaaatg tcaaacgagg cttctgtttt gcacctgcag atcaccgagt tggttttctt
840
ttcttttctt gccttttttt ttttttgaaa tttgccgagc agtggagccc tctgacaatt
900
tgcaaggccc tctgagaaaag gaagctgctt agagccaggg ggtagtggg tgaggggagc
960
gagtgtctgt tttgagatca ttatctgaac tcaggcagcc tagtagaggc agtggtaggg
1020
ttccaatggg tcttggtagg tgggaggtgg ggcattgtgca aagcaagcaa ggaacatttg
1080
gggtaagaaa acaaacatga ggcaaaaaaa aa
1112

<210> 5806

<211> 105

<212> PRT

<213> Homo sapiens

<400> 5806

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Ile | Tyr | Phe | Pro | Ile | His | Cys | Pro | Asp | Tyr | Leu | Arg | Ser | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Lys | Met | Thr | Glu | Val | Met | Met | Asn | Thr | Gln | Pro | Met | Glu | Glu | Ile | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Ser | Pro | Arg | Lys | Asp | Gly | Leu | Ser | Tyr | Gln | Ile | Phe | Pro | Asp | Pro |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Ser | Asp | Phe | Asp | Arg | Cys | Cys | Lys | Leu | Lys | Asp | Arg | Leu | Pro | Ser | Ile |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Val | Glu | Pro | Thr | Glu | Gly | Glu | Val | Glu | Ser | Gly | Glu | Leu | Arg | Trp |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Pro | Pro | Glu | Glu | Phe | Leu | Val | Gln | Glu | Asp | Glu | Gln | Asp | Asn | Cys | Glu |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Glu | Thr | Ala | Lys | Glu | Asn | Lys | Glu | Gln | | | | | | | |

100

105

<210> 5807

<211> 1429

<212> DNA

<213> Homo sapiens

<400> 5807

acccctccat ttctcgccat ggcccctgca ctgctcctga tccctgctgc cctcgccctt
60
ttcatcctgg cctttggcac cggagtggag ttctgtgcgt ttacctccct tcggccactt
120
cttgaggagg tcccggagtc tgggtggtccg gatgcccgcc agggatggct ggctgccctg
180
caggaccgca gcatccttgc ccccctggca tgggatctgg ggctcctgct tctatttgtt
240
gggcagcaca gcctcatggc agctgaaaga gtgaaggcat ggacatcccg gtacttttggg
300
gtccttcaga ggtcactgta tgtggcctgc actgccctgg ccttgcagct ggtgatgcgg
360
tactgggagc ccatacccaa aggcctctgt ttgtgggagg ctctgggctga gccatgggcc
420
acctgggtgc cgctcctctg ctttgtgctc catgtcatct cctggctcct catcttttagc
480
atccttctcg tctttgacta tgctgagctc atgggcctca aacaggtata ctaccatgtg
540
ctggggctgg gcgagcctct ggccctgaag tctccccggg ctctcagact cttctccac
600
ctgcgccacc cagtgtgtgt ggagctgctg acagtgtgtt ggggtggtgcc taccctgggc
660
acggaccgtc tctccttgc tttcctcctt accctctacc tgggcctggc tcacgggctt
720
gatcagcaag acctccgcta cctccgggcc cagctacaaa gaaaactcca cctgctctct
780
cggccccagg atggggaggc agagtgagga gctcactctg gttacaagcc ctgttcttcc
840
tctcccactg aattctaaat ccttaacatc caggccctgg ctgcttcatg ccagaggccc
900
aaatccatgg actgaaggag atgccccttc tactacttga gactttattc tctgggtcca
960
gtccataacc ctaaattctg agtttcagcc actgaactcc aaggctcact tctcaccagc
1020
aaggaagagt ggggtatgga agtcatctgt cccttactg tttagagcat gacactctcc
1080
ccctcaacag cctcctgaga aggaaaggat ctgcctgac cactcccctg gcactgttac
1140
ttgcctctgc gcctcagggg tccccttctg caccgctggc ttccactcca agaagggtgga
1200
ccagggtctg caagttcaac ggtcatagct gtccctccag gcccacact tgcctcacca
1260
ctcccgccc tagtctctgc acctccttag gccctgcctc tgggctcaga ccccaacct
1320
gtcaagggga ttctcctgct cttaactcga tgacttgggg ctccctgctc tcccaggaa
1380

gatgctctgc aggaaaataa aagtcagcct ttttctacaa aaaaaaaaaa
1429

<210> 5808

<211> 261

<212> PRT

<213> Homo sapiens

<400> 5808

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Ala | Leu | Leu | Leu | Ile | Pro | Ala | Ala | Leu | Ala | Ser | Phe | Ile | Leu |
| 1 | | | 5 | | | | | 10 | | | | | | 15 | |
| Ala | Phe | Gly | Thr | Gly | Val | Glu | Phe | Val | Arg | Phe | Thr | Ser | Leu | Arg | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Leu | Gly | Gly | Ile | Pro | Glu | Ser | Gly | Gly | Pro | Asp | Ala | Arg | Gln | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Trp | Leu | Ala | Ala | Leu | Gln | Asp | Arg | Ser | Ile | Leu | Ala | Pro | Leu | Ala | Trp |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Asp | Leu | Gly | Leu | Leu | Leu | Leu | Phe | Val | Gly | Gln | His | Ser | Leu | Met | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ala | Glu | Arg | Val | Lys | Ala | Trp | Thr | Ser | Arg | Tyr | Phe | Gly | Val | Leu | Gln |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Arg | Ser | Leu | Tyr | Val | Ala | Cys | Thr | Ala | Leu | Ala | Leu | Gln | Leu | Val | Met |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Arg | Tyr | Trp | Glu | Pro | Ile | Pro | Lys | Gly | Pro | Val | Leu | Trp | Glu | Ala | Arg |
| | 115 | | | | | | 120 | | | | | | 125 | | |
| Ala | Glu | Pro | Trp | Ala | Thr | Trp | Val | Pro | Leu | Leu | Cys | Phe | Val | Leu | His |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Val | Ile | Ser | Trp | Leu | Leu | Ile | Phe | Ser | Ile | Leu | Leu | Val | Phe | Asp | Tyr |
| 145 | | | | 150 | | | | | | 155 | | | | 160 | |
| Ala | Glu | Leu | Met | Gly | Leu | Lys | Gln | Val | Tyr | Tyr | His | Val | Leu | Gly | Leu |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Gly | Glu | Pro | Leu | Ala | Leu | Lys | Ser | Pro | Arg | Ala | Leu | Arg | Leu | Phe | Ser |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| His | Leu | Arg | His | Pro | Val | Cys | Val | Glu | Leu | Leu | Thr | Val | Leu | Trp | Val |
| | 195 | | | | | 200 | | | | | | 205 | | | |
| Val | Pro | Thr | Leu | Gly | Thr | Asp | Arg | Leu | Leu | Leu | Ala | Phe | Leu | Leu | Thr |
| | 210 | | | | 215 | | | | | | 220 | | | | |
| Leu | Tyr | Leu | Gly | Leu | Ala | His | Gly | Leu | Asp | Gln | Gln | Asp | Leu | Arg | Tyr |
| 225 | | | | 230 | | | | | | 235 | | | | 240 | |
| Leu | Arg | Ala | Gln | Leu | Gln | Arg | Lys | Leu | His | Leu | Leu | Ser | Arg | Pro | Gln |
| | | | 245 | | | | | 250 | | | | | 255 | | |
| Asp | Gly | Glu | Ala | Glu | | | | | | | | | | | |
| | | | 260 | | | | | | | | | | | | |

<210> 5809

<211> 2009

<212> DNA

<213> Homo sapiens

<400> 5809

nttttttttt ttttttttaa gatggaatct cgctccatca cccaggctgg agggcaatgg
60
cgtgatctcg gctcactgca gcctccacct cctgggttca agcaattctc ctgcctcagc
120

ctcctgagta gttggcacta taagcatcca acaccatgac cggctaattt ttgtgttttt
180
ggtagaagcg gggtttcacc atgttggcca ggctggcttc aaactcctga cctcagggtga
240
tccaccacc tcgctctccc aaagtgtctg tattacaggc gtgagccacc gagcccaacc
300
tgagtcacga ttctctcggg taacaggagg gccccccagg gaaagagggc gggcgggcgg
360
tctgcggaag ggcattgggt ctgaccaccg cacactctgg ccgccctccc gagtctccag
420
aactcctacg cctccttccc agcgggcaca ggccagcccg gctgaccctt ccccggaag
480
caggaggagc cctgcagaaa tcccaggag gaagtgggt ctggaacggc ctccctgcct
540
ctacgctcag gcggggaagc ctagtgcag agtgccgtgc caggaggtcc gggccacgtc
600
ccctgcacct ccccgagct gctcccagga cgggcagagg cttcggctgt ccacacctc
660
tgggtgaacg ctggggactt gcctggcgct gtgcgtgcac tgaccatgcc aaggcccacg
720
tctgcacatc tgtgcacagc agagggaccg caccaggcca ggactcacc tccgagtccc
780
ggccccagga atgtggatga agagaggctg ctgtgcgact cagtgaagtg ggtgccctcg
840
ctgaaggtct aggggagatg ggggtgggat gagagggtgct ggggcttcac agggcccccc
900
tccaccccg c attacagctg gagaggcagg actcaaacc atgtccccca gtccaaacc
960
ctggaaggct ggccccctt ctacgcctca gtttccccac acccctcgcc cccaactctg
1020
gggacaggaa actcagggtc tcaggcctca cggggactcc taccggctg ggggtcaaagg
1080
aggagctgct ctggtcgccc ctgccccagg agcctgagct gggccgggtcc tcaagacctg
1140
caggcaggac agagagagtt atgggtcacc ctacgcctg cccagctcta aaagcttcgg
1200
ttcatcatct caggggcaaa cctcagtga cccggggggc ttgtggaacc cttcctaacc
1260
cagcctcacc cagcccgact catgaggaca ccagtcagca gctaacacc agacacctg
1320
ggactcggag cacttacagg tccataaact taaattaact cttcgtcgg ctctctgctg
1380
gccaaactct acccaccac taaagcccca gctttcatac cctccttggg caaagacctc
1440
actctcacgc cgagcctcct ccccatcagc cccaagtccc tccctctggc ccagccctga
1500
ctatgtggac tggggctctct gtgtcagatg cagactcttc tgaccctgtg agaaaggctc
1560
atgacagcat gaggggtgtg aagctaacc atgagctctg gggaggccca ggggtctcct
1620
gtccccacct gccagtgtg gaagtggggc cggcctttgc tgaagcagca gcagaggctc
1680
accatcggg caggaggctg gcagcccggt aggggtggag cgaatctcat caccaggaa
1740

caagcccagt gtggagacca gaagcctgcg tggggcagga gttcccggcg cagcaagggg
 1800
 cgggacgagg accttgggtcc cggggcgggg cgggcggggc ccttatctct cagaacactc
 1860
 acaggcaacg cccaggactc cagaatcttc tgccctgggc agggagggcc tgcttgatc
 1920
 cttccccctt ccatcggggg ccacagagca caccctgga gaagcaggag cgggccctgg
 1980
 gcctcctcag cttggccacg gagttgctg
 2009

<210> 5810

<211> 52

<212> PRT

<213> Homo sapiens

<400> 5810

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Phe | Phe | Phe | Phe | Phe | Lys | Met | Glu | Ser | Arg | Ser | Ile | Thr | Gln | Ala |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Gly | Gly | Gln | Trp | Arg | Asp | Leu | Gly | Ser | Leu | Gln | Pro | Pro | Pro | Pro | Gly |
| | | | 20 | | | | 25 | | | | | | 30 | | |
| Phe | Lys | Gln | Phe | Ser | Cys | Leu | Ser | Leu | Leu | Ser | Ser | Trp | His | Tyr | Lys |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| His | Pro | Thr | Pro | | | | | | | | | | | | |
| | | 50 | | | | | | | | | | | | | |

<210> 5811

<211> 1607

<212> DNA

<213> Homo sapiens

<400> 5811

gttagcaaga aagtgatgtg ttccgggtag gggaattctg ttttgggtatt attttgtctt
 60
 tcctgagaaa agcatcacia aaagagatgt ttgccatcc tgtttgctgg ggtagtggga
 120
 agagaccggg ggtgatggtg gtgctggctg gacgtgggtg gtttcacagg acctgctgtg
 180
 tctgagagga gccatgcggt gattagaagc ttggaggctg cagatctgcc gacaccccag
 240
 gccatcgagc cccaggccat cgtgcagcag gtcccagccc ccagtcgaat gcagatgccg
 300
 caggggaacc cgctgctgct gtcccacacc ctgcaggagc tgctggccag ggacaccgtg
 360
 caggtggagc tcattccgga gaagaagggc ctcttcctga agcatgtgga gtatgaggtt
 420
 tccagccagc gcttcaagtc ctcggtatac agacggtaca atgacttcgt ggtcttccag
 480
 gagatgctcc tgcacaagtt cccctaccgt atgggtgcctg ccctgccacc caagagaatg
 540
 ctgggagctg acaggaggtt catcgaggcc aggaggagag ccctgaagcg cttcgtcaac
 600
 ctggtggcgc gacaccccct gttctccgag gatgtgggtc tcaagctctt cctgtccttc
 660

agcggctcgg atgtgcagaa caagttaaag gagtcagcac agtgcgtcgg ggacgaattc
 720
 ctgaactgta agctggctac cagggccaag gacttcctcc cagctgacat ccaggctcag
 780
 tttgccatca gccgggagct gatccggaac atctacaata gctttcacia gcttcgcgac
 840
 agggccgagc ggatcgcgtc gcgggccatc gacaatgcgg cagatcttct catattcggg
 900
 aaggagctaa gtgcaatagg gtctgacacg accccgctgc cctcctgggc cgctctgaat
 960
 agcagcacgt gggggtcctt gaagcaggct ctgaaaggcc tgtctgtgga attcgcgctg
 1020
 ctgcccagaca aggctgcaca acagggttaag caggaagaga acgacgtggg ggagaagctg
 1080
 aacctcttct tggatctgct gcagtcctat aaggacctgt gcgagcggca tgagaagggc
 1140
 gtgttgacaca agcaccagcg ggccctgcac aagtacagcc tgatgaagag gcagatgatg
 1200
 agcgccaccg cgcagaaccg cgagccggag tccgtggagc agctggagtc ccgcatcgtg
 1260
 gagcaggaga acgcgattca gacgatggag ctgcggaact acttctccct gtactgcctg
 1320
 caccaggaga cgcagctcat ccacgtctac ctgccccctca cctcccacat cctccgcgcc
 1380
 ttcgtcaact ctcagatcca agggcacaag gagatgagca aggtgtggaa cgacctgagg
 1440
 cccaagctca gctgcctctt tgcgggacca cacagcacc ctagccccacc gtgctccccg
 1500
 ccggaggacg gcctgtgtcc ttagtagcgc ctgaggctga ggtggtgctc cctgcggccc
 1560
 caagcttatt cccttagtg agggttaatt ttagcttgca ctggccc
 1607

<210> 5812

<211> 463

<212> PRT

<213> Homo sapiens

<400> 5812

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Trp | Cys | Trp | Leu | Asp | Val | Gly | Gly | Phe | Thr | Gly | Pro | Ala | Val | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Arg | Ser | His | Ala | Val | Ile | Arg | Ser | Leu | Glu | Ala | Ala | Asp | Leu | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Pro | Gln | Ala | Ile | Glu | Pro | Gln | Ala | Ile | Val | Gln | Gln | Val | Pro | Ala |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Pro | Ser | Arg | Met | Gln | Met | Pro | Gln | Gly | Asn | Pro | Leu | Leu | Leu | Ser | His |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Thr | Leu | Gln | Glu | Leu | Leu | Ala | Arg | Asp | Thr | Val | Gln | Val | Glu | Leu | Ile |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Pro | Glu | Lys | Lys | Gly | Leu | Phe | Leu | Lys | His | Val | Glu | Tyr | Glu | Val | Ser |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Ser | Gln | Arg | Phe | Lys | Ser | Ser | Val | Tyr | Arg | Arg | Tyr | Asn | Asp | Phe | Val |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Val | Phe | Gln | Glu | Met | Leu | Leu | His | Lys | Phe | Pro | Tyr | Arg | Met | Val | Pro |

| | | |
|---|-----|-----|
| 115 | 120 | 125 |
| Ala Leu Pro Pro Lys Arg Met Leu Gly Ala Asp Arg Glu Phe Ile Glu | | |
| 130 | 135 | 140 |
| Ala Arg Arg Arg Ala Leu Lys Arg Phe Val Asn Leu Val Ala Arg His | | |
| 145 | 150 | 155 |
| Pro Leu Phe Ser Glu Asp Val Val Leu Lys Leu Phe Leu Ser Phe Ser | | |
| 165 | 170 | 175 |
| Gly Ser Asp Val Gln Asn Lys Leu Lys Glu Ser Ala Gln Cys Val Gly | | |
| 180 | 185 | 190 |
| Asp Glu Phe Leu Asn Cys Lys Leu Ala Thr Arg Ala Lys Asp Phe Leu | | |
| 195 | 200 | 205 |
| Pro Ala Asp Ile Gln Ala Gln Phe Ala Ile Ser Arg Glu Leu Ile Arg | | |
| 210 | 215 | 220 |
| Asn Ile Tyr Asn Ser Phe His Lys Leu Arg Asp Arg Ala Glu Arg Ile | | |
| 225 | 230 | 235 |
| Ala Ser Arg Ala Ile Asp Asn Ala Ala Asp Leu Leu Ile Phe Gly Lys | | |
| 245 | 250 | 255 |
| Glu Leu Ser Ala Ile Gly Ser Asp Thr Thr Pro Leu Pro Ser Trp Ala | | |
| 260 | 265 | 270 |
| Ala Leu Asn Ser Ser Thr Trp Gly Ser Leu Lys Gln Ala Leu Lys Gly | | |
| 275 | 280 | 285 |
| Leu Ser Val Glu Phe Ala Leu Leu Ala Asp Lys Ala Ala Gln Gln Gly | | |
| 290 | 295 | 300 |
| Lys Gln Glu Glu Asn Asp Val Val Glu Lys Leu Asn Leu Phe Leu Asp | | |
| 305 | 310 | 315 |
| Leu Leu Gln Ser Tyr Lys Asp Leu Cys Glu Arg His Glu Lys Gly Val | | |
| 325 | 330 | 335 |
| Leu His Lys His Gln Arg Ala Leu His Lys Tyr Ser Leu Met Lys Arg | | |
| 340 | 345 | 350 |
| Gln Met Met Ser Ala Thr Ala Gln Asn Arg Glu Pro Glu Ser Val Glu | | |
| 355 | 360 | 365 |
| Gln Leu Glu Ser Arg Ile Val Glu Gln Glu Asn Ala Ile Gln Thr Met | | |
| 370 | 375 | 380 |
| Glu Leu Arg Asn Tyr Phe Ser Leu Tyr Cys Leu His Gln Glu Thr Gln | | |
| 385 | 390 | 395 |
| Leu Ile His Val Tyr Leu Pro Leu Thr Ser His Ile Leu Arg Ala Phe | | |
| 405 | 410 | 415 |
| Val Asn Ser Gln Ile Gln Gly His Lys Glu Met Ser Lys Val Trp Asn | | |
| 420 | 425 | 430 |
| Asp Leu Arg Pro Lys Leu Ser Cys Leu Phe Ala Gly Pro His Ser Thr | | |
| 435 | 440 | 445 |
| Leu Thr Pro Pro Cys Ser Pro Pro Glu Asp Gly Leu Cys Pro His | | |
| 450 | 455 | 460 |

<210> 5813

<211> 2991

<212> DNA

<213> Homo sapiens

<400> 5813

nttgatgtat gtaattgatc actttatttaa ctggcaaaaa gaagccttgt tgaggtgata
60
aaccgaactt cattacatcc tgtatgtcga gagcaaacac attgggacgt ggctgatggg
120

ttcccatctc aaggctgatt ctgatgatga taatgtttta gtagcattga ttgttctcta
180
attgaatttt tctttcttta ggcctcttct gaagagctga aagctgccta ccggaggctc
240
tgtatgctct accatccaga caagcacaga gaccagagc tcaagtcaca ggcggaacga
300
ctgtttaacc ttgttcacca ggcttatgaa gtgcttagtg acccccaaac cagggccatc
360
tatgatatat atgggaagag aggactggaa atggaaggat gggagggtgt ggaaaggagg
420
agaaccctg ctgaaattcg agaggagttt gagcggctgc agagagagag agaagagagg
480
agattgcagc agcgaaccaa tccaagctt tgtgacaaca aactgtgctc tgcagttttc
540
atcccgtaga atccgacccg gcctgaccac tgtcctagct cggaacctag acaagaacac
600
cgtgggctac ctgcagtggc gatgggggat ccagtcagcc atgaacacta gcatcgctcc
660
agacactaaa accagccact tcaactgtggc cctgcagctg ggaatccctc actcctttgc
720
actgatcagc tatcagcaca aattccaaga tgacgatcag actcgtgtga aaggatccct
780
gcagagcagg cttctttggg acggtggtgg agtacggagc tgagaggaag atctccaggc
840
acagcgtttt ggggtgcagct gtcagcgttg gagttccaca gggcgtttct ctcaaagtca
900
agctcaacag ggccagtcag acatacttct tccctattca cttgacggac cagcttctgc
960
ccagcgccat gttctatgcc accgtggggc ctctagtggc ctactttgcc atgcaccgtc
1020
tgatcatcaa accatacctc agggctcaga aagagaagga attggagaag cagagggaaa
1080
gcgcgcgcac cgatgtgctg cagaagaagc aagaggcgga gtccgctgtc cggctgatgc
1140
aggaatctgt ccgaaggata attgaggcag aagagtcag aatgggcctc atcatcgtca
1200
atgcctggta cgggaagttt gtcaatgaca agagcaggaa gagcgagaag gtgaagggtga
1260
ttgacgtgac tgtgcccctg cagtgcctgg tgaaggactc gaagctcatc ctacaggagg
1320
cctccaaggc tgggctgcct ggcttttatg acccgtgtgt gggggaagag aagaacctga
1380
aagtgtctta tcagttccgg ggcgtcctgc atcaggtgat ggtgctggac agtgaggccc
1440
tccggatacc aaagcagtcc cacaggatcg atacagatgg ataaactgcc aagaaccaga
1500
tttttaaaag gccgcaaaaa atcttttctt gggagtctac aaatttgga atgaaaaaac
1560
ccagacatca gatgttttta ttttatatta ttattataga aggtggtacc attatcaatt
1620
atgtgaaggg acatgcagac accccagctt ttgagggtgc tgggggtagg actgaggcag
1680
ccccactggg aaccagactg cagcctggcc catggctggt ttccaagga tcagttcctg
1740

gagggaaggg ctctggccct gactccgctg tgtcccgagc acacgtgctg accgcagccc
 1800
 gccgccctgt agttcttggc tgggtctgga ggtgtctgtg gagcaccctg ccctcaccac
 1860
 aggagcgtga gccacttctg cagtccacgc tgaacatggg aaacaacctg aaaagcaggg
 1920
 aggcctcccc gtcagggagc ctctgctgtg ctggcttccc atgaccacct cctcttgctg
 1980
 aaatattact gcttgaatct ggagcagatt gcgggtttat aaaactgctt tttatctgag
 2040
 aacaaacggg tttggaaatt agtcgtcttt tttccccact ccagagctg ctcaagtcac
 2100
 tccaccggcc ccctcggctt gggacagggg agtgtaactc ccgatcccag ggcctagccc
 2160
 tgacacaggt ggcttcccgt atcccgggtg gaaaacgccc tgccaccagc gggcttgagc
 2220
 tggcctgtgt ccctccaccg cctgcaccac ccacctccag agtgacgtgc tgggcaaggg
 2280
 cagctcaaga ggacaggacc aggcgcttgg caagacatca gacacacca acccaaaggc
 2340
 gtggacccca ggcccggccc gtggtaccca gcaggtggca ctgcagctcc ccgctcctgc
 2400
 aggtccagcg tcctcacagg aacaccaggg cctgtgctcc ggagccttcc ttcagaccct
 2460
 tcctccacgt gccacttgg gatgcagaat gcagcggagc taggaccccc tccacggcct
 2520
 ggacctcggc tgcagtaaag ttacgtgagg cctgtctctc ggggcctgga agtggcagcc
 2580
 atcagttgct cttgctgacc cctcggagca agcgcgcac aggtggtggc tgagacagct
 2640
 ggcgcggggg gcccgaagct gcgcggcct ccagcccacc cacagctgtt gctgaagtca
 2700
 ggcctccctc ccagcactg gtatctgagt aacggctaag aacctcctc ctctggtttt
 2760
 gaaaagcagt tcgggttgtc caattctgta acattcatct ccatttttta aaaaggtttc
 2820
 tctgacggcc ccacggcccc agccgcgggtg agcgtcgtgt tgcagagcc tgggccccgg
 2880
 gcttcccgtg cgcctctgcc gcaggtgctt ctgggcaccc atcctctgcg tttcatttgc
 2940
 agtcgactgt acagaaggca ctcaccacaa taaacctttc ctgaaagcag a
 2991

<210> 5814

<211> 149

<212> PRT

<213> Homo sapiens

<400> 5814

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ser | Ser | Glu | Glu | Leu | Lys | Ala | Ala | Tyr | Arg | Arg | Leu | Cys | Met | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Tyr | His | Pro | Asp | Lys | His | Arg | Asp | Pro | Glu | Leu | Lys | Ser | Gln | Ala | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Arg | Leu | Phe | Asn | Leu | Val | His | Gln | Ala | Tyr | Glu | Val | Leu | Ser | Asp | Pro |

```

          35          40          45
Gln Thr Arg Ala Ile Tyr Asp Ile Tyr Gly Lys Arg Gly Leu Glu Met
   50          55          60
Glu Gly Trp Glu Val Val Glu Arg Arg Arg Thr Pro Ala Glu Ile Arg
  65          70          75          80
Glu Glu Phe Glu Arg Leu Gln Arg Glu Arg Glu Glu Arg Arg Leu Gln
          85          90          95
Gln Arg Thr Asn Pro Lys Leu Cys Asp Asn Lys Leu Cys Ser Ala Val
          100          105          110
Phe Ile Pro Trp Asn Pro Thr Arg Pro Asp His Cys Pro Ser Ser Glu
          115          120          125
Pro Arg Gln Glu His Arg Gly Leu Pro Ala Val Ala Met Gly Tyr Pro
          130          135          140
Val Ser His Glu His
145

```

<210> 5815

<211> 590

<212> DNA

<213> Homo sapiens

<400> 5815

```

ttcatccagg ctgctcttgg ggatcagcca cgtgatatcc tttgtggggc agctgatgaa
60
gttctagctg ttctaaagaa tgaaaagctg cgggacaagg aaaggcgaaa ggagattgac
120
ctgctgctgg gtcaaacaga tgataccaga taccatgtgc tagtgaacct gggcctcccg
180
agtctcttta gttttgggct tgtagatgat gccaccatc tcatcaatgc cctccgacag
240
cagagtataa cccttcatct tgttgatgtc atgccggtcc tcatcacgct ttcttcgctt
300
ggctcttctt tctcctgca tctgcggttt ggtccgttga gccttgtctc ccatacgggt
360
gccctccagc ttcccaacaa gggacagcac ctctcctgtg ggttcatccc ggcgggtccg
420
gtcaatgaga gaacggtcag cttggagcac aagattcgag ttgccttgt actcgtattg
480
cagactacgg gcggttacat ccgccatggc cgcggctgct cggaggcttc agaccaccac
540
gcctccatac cgcaagctgc aaacggccgc agatctctgc tctggcgcc
590

```

<210> 5816

<211> 196

<212> PRT

<213> Homo sapiens

<400> 5816

```

Phe Ile Gln Ala Ala Leu Gly Asp Gln Pro Arg Asp Ile Leu Cys Gly
  1          5          10          15
Ala Ala Asp Glu Val Leu Ala Val Leu Lys Asn Glu Lys Leu Arg Asp
          20          25          30
Lys Glu Arg Arg Lys Glu Ile Asp Leu Leu Leu Gly Gln Thr Asp Asp

```

[illegible]

<213> Homo sapiens

<400> 5818

```

Met Gly Gln Leu Gln Asn Lys Glu Asn Asn Asn Thr Lys Asp Ser Pro
 1           5           10           15
Ser Arg Gln Cys Ser Trp Asp Lys Ser Glu Ser Pro Gln Arg Ser Ser
          20           25           30
Met Asn Asn Gly Ser Pro Thr Ala Leu Ser Gly Ser Lys Thr Asn Ser
          35           40           45
Pro Lys Asn Ser Val His Lys Leu Asp Val Ser Arg Ser Pro Pro Leu
          50           55           60
Met Val Lys Lys Asn Pro Ala Phe Asn Lys Gly Ser Gly Ile Val Thr
65          70          75          80
Asn Gly Ser Phe Ser Ser Ser Asn Ala Glu Gly Leu Glu Lys Thr Gln
          85          90          95
Thr Thr Pro Asn Gly Ser Leu Gln Ala Arg Arg Ser Ser Ser Leu Lys
          100         105         110
Val Ser Gly Thr Lys Met Gly Thr His Ser Val Gln Asn Gly Thr Val
          115         120         125
Arg Met Gly Ile Leu Asn Ser Asp Thr Leu Gly Asn Pro Thr Asn Val
          130         135         140
Arg Asn Met Ser Trp Leu Pro Asn Gly Tyr Val Thr Leu Arg Asp Asn
145         150         155         160
Lys Gln Lys Glu Gln Ala Gly Glu Leu Gly Gln His Asn Arg Leu Ser
          165         170         175
Pro Met Ile Met Ser Ile Thr Val Leu His Asp Glu Leu Asp Asp
          180         185         190

```

<210> 5819

<211> 1652

<212> DNA

<213> Homo sapiens

<400> 5819

```

gatattcttt tggaaacgta atattggcct tggggctctc cagccctttg ggacttccaa
60
tgggatctta gaagcagccg aagcagcgtg agggcggccg agggccagcc acgatttgaa
120
cgctctgcct tgcagctctt ctggaccgag gagcccaaag ccctaccctc accattcacc
180
aggtcctgtg ggaagagcag cgtggaggtg ggctgaggtt agaaggtgca gagcgtggaa
240
gaagattgtg agctgagtat tggacatctg ttcttgaata gtccctgggc ctgccatagg
300
aaaggaagtt ctccagggtt acagttctta tccgcgtgaa tacacatggc tctgttacga
360
aaaattaatc aggtgctgct gttocttctg atcgtgaccc tctgtgtgat tctgtataag
420
aaagttcata aggggactgt gcccaagaat gacgcagatg atgaatccga gactcctgaa
480
gaactggaag aagagattcc tgtggtgatt tgtgctgcag cagggaggat ggggtgccact
540
atggctgcca tcaatagcat ctacagcaac cctgacgcca acatcttggt ctatgtagtg
600

```

ggactccgga atactctgac tcgaatacga aaatggattg aacattccaa actgagagaa
 660
 ataaacttta aaatcgtgga attcaaccog atggctcctca aagggaagat cagaccagac
 720
 tcatcgaggc ctgaattgct ccagcctctg aactttgttc gatttttatct ccctctactt
 780
 atccaccaac acgagaaagt catctatttg gacgatgatg taattgtaca aggtgatatc
 840
 caagaactgt atgacaccac cttggccctg ggccacgcgg cggctttctc agatgactgc
 900
 gatttgccct ctgctcagga cataaacaga ctcggtgggac ttcagaacac atatatgggc
 960
 tatctggact accggaagaa ggccatcaag gaccttggca tcagccccag cacctgctct
 1020
 ttcaatcctg gtgtgattgt tgccaacatg acagaatgga agcaccagcg catcaccaag
 1080
 caattggaga aatggatgca aaagaatgtg gagtacgtga aggcttctct accatttttt
 1140
 ccatgcttgg aaacaaaatc attcaattaa tttccacac atagttcaag ggtagaaat
 1200
 atttcacagt catctcaggt cagattttct tacagaggca atgttaagaa agaaaagggg
 1260
 gcagtcaatt aaaacctttc ctcaaaagat ataaatcaga ggaatcaaga tcctgtggag
 1320
 cgaggagtcc ctgattatac attttcctag taagctgttg aaaaatgtga cttgaatctt
 1380
 ttccacaaa caatcttcat ttatcttagt tgagtttccc ctctaacaat agattttttt
 1440
 attaaggatt attatataaa gtcaattttg ctttttaagg tttattttta taatttataa
 1500
 tttttcgta tcggagtttt aaaatagaga agataaaaaat aagtctaata caagcactat
 1560
 tatcccatca ttgtattgcc tagcagtctt gtgtatctgg atattttaat accatcataa
 1620
 ccttgaattt gcaagtaaag ttattctaaa ta
 1652

<210> 5820

<211> 274

<212> PRT

<213> Homo sapiens

<400> 5820

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Leu | Leu | Arg | Lys | Ile | Asn | Gln | Val | Leu | Leu | Phe | Leu | Leu | Ile |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Thr | Leu | Cys | Val | Ile | Leu | Tyr | Lys | Lys | Val | His | Lys | Gly | Thr | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Lys | Asn | Asp | Ala | Asp | Asp | Glu | Ser | Glu | Thr | Pro | Glu | Glu | Leu | Glu |
| | | 35 | | | | | 40 | | | | 45 | | | | |
| Glu | Glu | Ile | Pro | Val | Val | Ile | Cys | Ala | Ala | Ala | Gly | Arg | Met | Gly | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Thr | Met | Ala | Ala | Ile | Asn | Ser | Ile | Tyr | Ser | Asn | Pro | Asp | Ala | Asn | Ile |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Leu | Phe | Tyr | Val | Val | Gly | Leu | Arg | Asn | Thr | Leu | Thr | Arg | Ile | Arg | Lys |

```
<210> 5821
<211> 3292
<212> DNA
<213> Homo sapiens
```

```

<400> 5821
ngcctgtaac cccaacactt tgggaggcca cgccaggagg atcacttgag gccaggagtt
60
cgagaccagc ctggtcaaca tagcgagact tcgtcactag aaaaaattta aaaaattttt
120
taaaaaggaa aaaatataac ttagagcccc ctatgaaaaa ctaaattagc atcatgacag
180
gatacacttt ggggagtgaa atttcacagt acctttattt aattccaagc catagagcct
240
ggtaatatTTT ttctctttat cagctgtggc actaaaataa cagtggattt tttccctcta
300
gacattcttc ttttgGCCga tgaaaaattt gacttcgatc tttcattgtc ttcttcgagt
360
gcaaatgaag atgatgaagt cttcttcgga ccctttggac ataaagaaag atgtattgct
420
gccagcttgg aattaaataa tccggttccc gaacagcctc cgttgcccac atctgagagt
480
ccctttgcct ggagccctct ggccggggag aagttcgtgg aggtgtacaa agaagctcac
540
ttactggctt tacacattga gagcagcagc cggaaccagg cagcccaagc tgccaagcct
600
gaagaccctc ggagccaggg cgtggaaaaga ttcatacagg agtcaaaatt aaaaataaac
660

```


ctcttttgaga aagaaaagga aatgaagaaa agccccacgt ctcttaaaag ggagacatac
720
tacctgtcag acagccccctt gctggggccc cctgtgggtg agcctcggct cttggcctcc
780
tccccggccc tgcccagctc tgggtgcccag gcccgctca cccgggccc ggggcctccg
840
cactctgctc atgctttgcc cagggaatca tgcactgctc atgctgcaag tcaggcagcg
900
actcagagga agccccggac caaattgctg ctgcctcgag cggcctctgt tagaggaaga
960
agcatcccctg gggctgcgga gaagcccaag aaagagattc cagctagtcc ttccaggaca
1020
aaaatcccag ctgagaagga atcccaccgg gatgttctcc ctgacaaacc tgccccgggt
1080
gctgtcaatg tgccggccgc cggaagccac ttggggccagg gcaagcgggc gatccctgtt
1140
ccaaacaagt tggggctgaa gaagaccctg ttaaaagcac ccggctctac cagcaatctc
1200
gcaaggaagt cctcctcggg gcctgtttgg agcggggcat ccagtgcgtg cacatcccca
1260
gcagtgggca aagctaaatc aagtgaattt gcaagtattc ctgcaaatac ctccccgcct
1320
ctgtcaaaca tcagcaagtc aggcagaatg ggaccgcga tgctgcggcc agctctgcct
1380
gcaggccctg tgggggcatc ctctggcag gccaaagcggg tcgatgtttc tgagctggca
1440
gcggagcagc tcacggcacc cccctcagca tccccaccc aaccccagac tccggaaggt
1500
ggcggccagt ggctgaactc cagtgcgtc tggtcagaat cttctcaatt gaataagact
1560
agaagtatca gacggcgaga ttctgtcta aattccaaga caaagggtat gcctactcct
1620
acaaatcaat taaaattcc taagttttct attggtgact ccccgacag ctcaacacca
1680
aagctttcgc gggcacagcg gccgcagtcg tgcacgtcag ttggcagggt cactgtccac
1740
agcaccctcg ttagacgctc atctgggcca gcaccacaaa gcctgctgag cgcattggct
1800
gtgtcagcct tgcccacacc cgcagccgg cgctgctctg gccttcacc gatgaccccc
1860
aaaacgatgc ccagggccgt gggctctccc ctgtgtgtgc cagctcggag acgttctct
1920
gagccccgca agaactctgc aatgagaact gaaccaacaa gggagagcaa cagaaagaca
1980
gattccaggc tgggtgatgt gtcccctgac aggggttctc ctcttcccg tgtgcctcag
2040
gcacttaact tttctccaga ggaaagcgat tctactttct ccaaaagtac tgccacagaa
2100
gtagctcggg aggaagccaa gccgggtgga gatgcagccc ctagtgaggc tcttcttgta
2160
gatatacaac tggaaccact cgcggtcact ccagatgctg caagccagcc cctcattgac
2220
cttctctca tcgacttctg cgatacccca gaagcacacg tggctgtagg atctgaaagc
2280

aggcctctga tcgacctcat gacaaacact ccagacatga ataaaaatgt ggccaaacct
 2340
 tcaccggtgg tgggacagct catagacctg agctcccctc tgatccagct gagccctgag
 2400
 gctgacaagg agaacgtgga ttccccactc ctcaagttct aagccgaacc aaatcctttg
 2460
 ccttgaaaga acagccctaa agtgggttttc aaccctcaga aacaagcttt aggctggctg
 2520
 cagtggctta cacttgtaac cctagaactt gggaggctga ggtgggcgga ttacttgagc
 2580
 ccaggagttc gggaccagcc tgggaaatat agtgaaactc ctgtccctac aaaaaatata
 2640
 aaaattagcc ggggtgtgga gtgcatgcct gtagtcccag ctacttgga ggctgaagt
 2700
 ggaggatggc ctgagctcaa ggagatgcag gctgcagtgg gctgtgattg tgccactgca
 2760
 ctccagcctg ggcaccaatg tgagaacctg tcttggaaaa aaaaaaaaag aaacatgttt
 2820
 tagtagaagt tttatttgaa aaagaaaaat aagcataaat atattcccag tgctggagag
 2880
 ggtgggctga gggactgggg ccagcacgga ccaccaagg cctctgcttc ccgcccgcac
 2940
 cctcctcgct gccattctct gggctggaat gtgaagcctc agtcactcta aatgaagaat
 3000
 tttcttttga atgttttgta tgtaaaatag caagtggcta tttttaagt taagtttgta
 3060
 taaatagtta gatattctag atttacatta aattgtaaaa taaatggact tattgaagca
 3120
 tatcttgatt ttttaagctta tcttgatttt caaacatgca tagctatttt tatcactcta
 3180
 atcagtaagg ctactatcta gactcgaatg ctttcataca agtgattttc aaaaattagt
 3240
 caatataaat tgatgtcagt gcaggcccgg cccgccccca gatacactag tt
 3292

<210> 5822

<211> 712

<212> PRT

<213> Homo sapiens

<400> 5822

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Leu | Leu | Leu | Ala | Asp | Glu | Lys | Phe | Asp | Phe | Asp | Leu | Ser | Leu | Ser |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Ser | Ser | Ser | Ala | Asn | Glu | Asp | Asp | Glu | Val | Phe | Phe | Gly | Pro | Phe | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Lys | Glu | Arg | Cys | Ile | Ala | Ala | Ser | Leu | Glu | Leu | Asn | Asn | Pro | Val |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Pro | Glu | Gln | Pro | Pro | Leu | Pro | Thr | Ser | Glu | Ser | Pro | Phe | Ala | Trp | Ser |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Pro | Leu | Ala | Gly | Glu | Lys | Phe | Val | Glu | Val | Tyr | Lys | Glu | Ala | His | Leu |
| | | 65 | | | 70 | | | | | 75 | | | | 80 | |
| Leu | Ala | Leu | His | Ile | Glu | Ser | Ser | Ser | Arg | Asn | Gln | Ala | Ala | Gln | Ala |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Ala | Lys | Pro | Glu | Asp | Pro | Arg | Ser | Gln | Gly | Val | Glu | Arg | Phe | Ile | Gln |

4986

| | | |
|---|-----|-----|
| 530 | 535 | 540 |
| Ser Ala Met Arg Thr Glu Pro Thr Arg Glu Ser Asn Arg Lys Thr Asp | | |
| 545 | 550 | 555 |
| Ser Arg Leu Val Asp Val Ser Pro Asp Arg Gly Ser Pro Pro Ser Arg | | |
| | 565 | 570 |
| Val Pro Gln Ala Leu Asn Phe Ser Pro Glu Glu Ser Asp Ser Thr Phe | | |
| | 580 | 585 |
| Ser Lys Ser Thr Ala Thr Glu Val Ala Arg Glu Glu Ala Lys Pro Gly | | |
| | 595 | 600 |
| Gly Asp Ala Ala Pro Ser Glu Ala Leu Leu Val Asp Ile Lys Leu Glu | | |
| | 610 | 615 |
| Pro Leu Ala Val Thr Pro Asp Ala Ala Ser Gln Pro Leu Ile Asp Leu | | |
| | 625 | 630 |
| Pro Leu Ile Asp Phe Cys Asp Thr Pro Glu Ala His Val Ala Val Gly | | |
| | 645 | 650 |
| Ser Glu Ser Arg Pro Leu Ile Asp Leu Met Thr Asn Thr Pro Asp Met | | |
| | 660 | 665 |
| Asn Lys Asn Val Ala Lys Pro Ser Pro Val Val Gly Gln Leu Ile Asp | | |
| | 675 | 680 |
| Leu Ser Ser Pro Leu Ile Gln Leu Ser Pro Glu Ala Asp Lys Glu Asn | | |
| | 690 | 695 |
| Val Asp Ser Pro Leu Leu Lys Phe | | 700 |
| 705 | 710 | |

<210> 5823

<211> 2585

<212> DNA

<213> Homo sapiens

<400> 5823

nggggttctc caaaaagtgt gttagttccc ggtcacctga gctccgggtg acgcggtctgc
60

ggtagctgcg gatacaagcc ttccgcggtt cctgcctggc gaccccgacc tctctctgct
120

gtctctccgc tccgccaccc cgaaccgccc aaggctctgt ccttttcttc ctgtcctttg
180

ccagcgttgg gccggaccgg gccgagccgg gccgcccggg cgcagtcttt aaccatggcg
240

tccctcttca agaagaaaac cgtggatgat gtaataaagg aacagaatcg agagttacga
300

ggtacacaga gggctataat cagagatcga gcagcttttag agaaacaaga aaaacagctg
360

gaattagaaa ttaagaaaat ggccaagatt ggtaataagg aagcttgcaa agtttttagcc
420

aaacaacttg tgcattctacg gaaacagaag acgagaactt ttgctgtaag ttcaaaagtt
480

acttctatgt ctacacaaac aaaagtgatg aattcccaa tgaagatggc tggagcaatg
540

tctaccacag caaaaacaat gcaggcagtt aacaagaaga tggatccaca aaagacatta
600

caaacaatgc agaatttcca gaaggaaaac atgaaaatgg aatgactga agaatgatc
660

aatgatacac ttgatgacat ctttgacggt tctgatgacg aagaagaaag ccaggatatt
720

gtgaatcaag ttcttgatga aattggaatt gaaatttctg gaaagatggc caaagctcca
780
tcagctgctc gaagcttacc atctgcctct acttcaaagg ctacaatctc agatgaagag
840
attgaacggc aactcaaggc tttaggagta gattagtcaa aagaagtcac actattttgc
900
ttacttataa ttatgtagta taaaccaagc acagtgcaga tttcttttac aaaacacatg
960
tattttgcaa aaaaaaaaaa atggagacca tgagtgaaca gttgtttcct aacccatggc
1020
tatttagaat cttttgcaa agaatgacaa tgatgcaaaa atgggaacag tttggatttt
1080
aattagaact gtttatgagt gatgatgtgt aaaaagttga cttctctttt gcatggcaca
1140
gagaaattat attccttact tcatgtcagt ttatgttcta aatctttttc actgaatata
1200
aaaatcttgt taaatgccat taggcaccaa cttaaagagg gttgtaaaaa tattaanaag
1260
atatcgtaa ttctgtatct gttgcttctc ttttgtaagt gattatgtgt tatgaccata
1320
gggtggttaca gctgcaaact tatttttaaa tgggtcaaaaa gaagagtgtc atttaaacat
1380
ctgtcttaaa caaaaactgt cataactttt cttttttttt tttccattag gagaacattc
1440
tagttggtaa atttcaaaat gtgcttgaca cctgccttaa atagcacaga cctattgtgc
1500
acatctttta attatttcag ctggcagaaa agaattacat ttaaaactga aatcaaggcc
1560
tcaatacaaa gattatcctg gctcttttct atctctgtgg gcctaattga aatatgtact
1620
cttattttag acacgcctct gttaaaacag gtgttttaac atgttaaaac agaccagggt
1680
ttcctggtct cagacctatg atgacttctc cctttgatgt cactactgtg aattgaatat
1740
aattagtaaa aatagacgat gaataaataa cactttatag taagaaaaca atatattttg
1800
gccatctaaa aatgagaatt ataattatat gaattataat ttaaactgtt taattttgtt
1860
taatgtgtat attgaatctt ccaaattgaa gccattatc tcaattaagt actacaacta
1920
tgacaatgct tgacctacat ttctaaaata aaaattcaca ttttttgata aataaactac
1980
agttttacca gaaattacta tctaaatgtg tattagcagt attttttaag gtgaaattgc
2040
cttggtatct aatgaatgtg tagacagga gataaaatga aggattgcca gactagttag
2100
aatagaattt aggattaggt tagttttgaa aaatgatgtt gtaatatatg ggttctaaca
2160
catcctacca taaaaactgg aggagatatg tgtaacctgg ttaatttggg atggtggaca
2220
ttttgggcta atactgacaa aatacatctt aggactagta tacatgtgac acggattgct
2280
aggaggaatg aaaaactaaa ctgtatagtt tatattccgt aaaccatttt ataattgtca
2340

```
<210> 5824
<211> 213
<212> PRT
<213> Homo sapiens
```

```
<210> 5825
<211> 1940
<212> DNA
<213> Homo sapiens
```

4989

aaatacagac caaatgtcac ctctctgttc tgtcattctt ttatcactca gcagacagct
120
agtctgggcc aggctctacg ctggaacgag ggacacagga atgagggatt ttttcccacc
180
cccaggaagc acatagggcac acagtctgtg cctccttagc actgtggcct ctgggttctc
240
atcagggcca gcaacctcac ctgcctcac ctgtccgtcc ttagaagggc atttgtacac
300
tctgaaaagc aacgggtcttc aggttccttc tttctggatt actaagatct tgattttgat
360
gtgtttcagc tggaaagggc tacccttgca aaacatgtaa gatagtgtg aactccatag
420
aacagtacca agctcatgtc agcggcttca aacacaagaa ccagtcacca aaaacagtgg
480
catcatccct gggccagatt ccaatgcaaa ggcaacccat tcagaaagac tcaaccacct
540
tggaagacta gaggtgattc tgcccagcat cccatattgg gccagccatg agccagcttc
600
ccgtgactgc tcagcccttg gctccctctt gctcgttggt ctcaccagga aagtacacgg
660
gectgaggca ggattgggcc acagacagcc tctcattggg ccgggctaata tcaactctgc
720
tgctccctct tggcaggggt cctgtaggct atgacagggg aggcaagggg attgagagac
780
tcgggggtctc gcggggtggg agtttgagg gtggctttcc ccatttccca acccctctgg
840
gccttaggtg ctgaggcccc tgccacctgt ctttctctta aaggtcagtt ttggggccagt
900
tcttgcaact aaagagcaga gatctctctg ggccctagac atttccagca aaacctggaa
960
ctttcatgcc aaacctgggg cagggcagga aacagaggaa atggctgcaa catgggagct
1020
tggaagctaata acgacactct gccttcccc agaagggtgca ggctttctctg agtcttagac
1080
cagatatggc cagttgcgca ggtttctgcc aactgtgaag tatctctctg gagcagtgac
1140
acaatcttg cggagcattg ctacccccgc tgccccctcc acagttctctg aatgggtgcta
1200
aggatctgca gcagttggca acgagctggg gctggggggcg gcctccatgt ccactgagat
1260
cataggacac tccaatgggg atgggacctt tccccctctc catcagaggt gctctgacct
1320
taggttacac gggaaagtgc cccacatgca agtctccctg agggttctgc ccctaaaggc
1380
agactgcctc atgcccgtca gctgtgaggt tcattgctac cctcgccct actagccctc
1440
tcttccccct tgtgcagcgg accacttgcc cagtttgctg tgggtgctagc cttccccatc
1500
atccaccggg tgattttctgg gtcccagggg aagaaagaga gagctgatgc aggtttctac
1560
agtgaggaac aggcgtttcc caggccccac acccagattt ctctatcttt gctgtgtttt
1620
atggcctggg actgagtcca cacggataga ttttctcttg taaccttgag acgagaattc
1680

caaggagtgt caccatcaga ggcttctctt catttgtgtca aagaagcccc tagctgctct
 1740
 cgtggcctcc ttccccact ccctatccct tcacctgtga aatgcctttg ctttgcatat
 1800
 tgtgtgtgga tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg tatgtgtgtg cttctgtgtg
 1860
 tgcctaatagc tctgtctctt ggtcactgaa gcatccaaat aaagaatttc cctcatgggc
 1920
 cagactaaaa aaaaaaaaaa
 1940

<210> 5826

<211> 88

<212> PRT

<213> Homo sapiens

<400> 5826

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | His | Thr | Asp | Arg | Phe | Phe | Leu | Val | Thr | Leu | Arg | Arg | Glu | Phe | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Val | Ser | Pro | Ser | Glu | Ala | Ser | Leu | His | Cys | Val | Lys | Glu | Ala | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Cys | Ser | Arg | Gly | Leu | Leu | Pro | Pro | Leu | Pro | Ile | Pro | Ser | Pro | Val |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Lys | Cys | Leu | Cys | Phe | Ala | Tyr | Cys | Val | Trp | Met | Cys | Val | Cys | Val | Cys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Cys | Val | Cys | Val | Cys | Val | Cys | Phe | Cys | Val | Cys | Leu | Met | Leu | Cys |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Leu | Leu | Val | Thr | Glu | Ala | Ser | Lys | | | | | | | | |
| | | | | | | | 85 | | | | | | | | |

<210> 5827

<211> 428

<212> DNA

<213> Homo sapiens

<400> 5827

tttttaggcaa cacttcgtat gttttaagag ctaaagcaac taagaacaca gtactgtgac
 60
 ccacactaag gaatccaggg aagagaagca ttgccttagg ggtcacagca agccagagag
 120
 tccagattaa aagctccagc ttgggggcct gtttcaaag accaggtagg ttcagccacc
 180
 ccctggagac tcgaatagga agaatactga gatacaacat ttgggagaga gatgagaaag
 240
 aagcccagct ttataaagag ggggcgttcc cagttactta atctatgcct ggcccagaaa
 300
 aggtgaaaac atgaggtggg ggacatgaaa attgttaaag aaagtgaact gtgcagtaag
 360
 aatgagttgg gcgaggtgca ccagcagagg ggagggcagg aggaaggagg aggcagtgatg
 420
 aggggggag
 428

<210> 5828

tgggacaagg accagctgac tgacagctgc taccagttta acttccagtc cacgctgtcg
900
tggagggagg cctgggccag ctgcgagcag caggggtgcgg atctgctgag catcacggag
960
atccacgagc agacctacat caacggcctc ctactgggt acagctccac cctgtggatc
1020
ggcttgaatg acttggacac gagcggaggc tggcagtggc cggacaactc gcccctcaag
1080
tacctcaact gggagagtga ccagccggac aaccccagtg aggagaactg tggagtgatc
1140
cgactgagt cctcgggcgg ctggcagaac cgtgactgca gcacgcgct gccctatgtg
1200
tgcaagaaga agcccaacgc cacggccgag cccaccctc cagacaggtg ggccaatgtg
1260
aagggtggagt gcgagccgag ctggcagccc ttccagggcc actgctaccg cctgcaggcc
1320
gagaagcgca gctggcagga gtccaagaag gcatgtctac ggggcggtgg cgacctggtc
1380
agcatccaca gcatggcgga gctggaattc atcaccaagc agatcaagca agaggtggag
1440
gagctgtgga tcggcctcaa cgatttgaaa ctgcagatga attttgagtg gtctgacggg
1500
agccttgtga gcttcaccca ctggcacccc tttagagcca acaacttccg ggacagtctg
1560
gaggactgtg tcaccatctg gggcccggaa ggccgctgga acgacagtcc ctgtaaccag
1620
tccttgccat ccactctgaa gaaggcaggc cagctgagcc agggggccgc cgaggaggac
1680
catggctgcc ggaaggggtg gacgtggcac agccatcct gctactggct gggagaagac
1740
caagtacct acagtgaggc ccggcgctg tgactgacc atggctctca gctggtcacc
1800
atcaccaaca ggttcgagca ggccttcgtc agcagcctca tctacaactg ggagggcgag
1860
tacttctgga cggcctgca ggacctcaac agcaccggct cttcttctg gctcagtggg
1920
gatgaagtca tgtacacca ctggaaccgg gaccagccc ggtacagccg tgggggctgc
1980
gtggcgctgg cactggcag cgccatgggg ctgtgggagg tgaagaactg tacctcgttc
2040
cgggcccgt acatctgccg gcagagcctg ggcactccag tgacgccgga gctgccgggg
2100
ccagatccca cgcccagcct cactggctcc tgtcccagg gctgggcctc ggacaccaa
2160
ctccggtatt gctataaggt gttcagctca gagcggctgc aggacaagaa gagctgggtc
2220
caggcccagg gggcctgcca ggagctgggg gccagctgc tgagcctggc cagctacgag
2280
gaggagcact ttgtggccaa catgctcaac aagatcttcg gtgaatcaga acccgagatc
2340
cacgagcagc actggttctg gatcggcctg aaccgtcggg atcccagagg gggtcagagt
2400
tggcgctgga gcgacggcgt agggttctct taccacaatt tcgacgggag ccggcacgac
2460

gacgacgaca tccgaggtctg tgcggtgctg gacctggcct ccctgcagtg ggtggccatg
2520
cagtgcgaca cacagctgga ctggatctgc aagatcccca gaggtacgga cgtgcgggag
2580
cccgacgaca gccctcaagg ccgacgggaa tggctgcgct tccaggaggc cgagtacaag
2640
ttctttgagc accactccac gtgggcgag gcgcagcgca tctgcacgtg gttccaggcc
2700
gagctgacct ccgtgcacag ccaggcggag ctagacttcc tgagccacaa cttgcagaag
2760
ttctcccgga cccaggagca gcaactggtg atcggcctgc acacctctga gagcgatggg
2820
cgcttcagat ggacagatgg ttccattata aacttcatct cctgggcacc aggcaaacct
2880
cggcctgtcg gcaaggacaa gaagtgcgtg tacatgacag ccagccgaga ggactggggg
2940
gaccagaggt gcctgacagc cttgccctac atctgcaagc gcagcaacgt caccaaagaa
3000
acgcagcccc cagacctgcc aactacagcc ctgggggggt gccctctga ctggatccag
3060
ttctcaaca agtggtttca ggtccagggc caggaacccc agagccgggt gaagtgggtca
3120
gaggcacagt tctcctgtga acagcaagag gccagctgg tcaccatcac aaacctta
3180
gagcaagcat tcatcacagc cagcctgcc aatgtgacct ttgaccttg gattggcctc
3240
catgcctcgc agagggaact ccagtggtg gagcaggagc ctttgatgta tgccaactgg
3300
gcacctgggg agccctctgg ccctagccct gctcccagt gcaacaaacc gaccagctgt
3360
gcggtggtcc tgcacagccc ctcagcccac ttcactggcc gctgggacga tcggagctgc
3420
acggaggaga cccatggctt catctgccag aagggcacgg acccctccct gagcccgctc
3480
ccagcagcgc tgccccccgc ccggggcact gagctctcct acctcaacgg caccttccgg
3540
ctgcttcaga agccgctgcg ctggcacgat gccctcctgc tgtgtgagag ccacaatgcc
3600
agcctggcct acgtgcccga ccctacacc caggccttcc tcacgcaggc tgcccgaggg
3660
ctgcgcagc cgctctggat tgggctggct ggcgaggagg gctctcggcg gtactcctgg
3720
gtctcagagg agccgctgaa ctacgtgggc tggcaggacg gggagccgca gcagccgggg
3780
ggctgtacct acgtagatgt ggacggggcc tggcgcacca ccagctgtga caccaagctg
3840
cagggggctg tgtgtggggg tagcagtggg cccctcctc cccgaagaat aagctaccat
3900
ggcagctgtc cccagggaact ggcagactcc gcgtggattc cttccggga gcactgctat
3960
tctttccaca tggagctgct gctgggccac aaggaggcgc gacagcgctg ccagagagcg
4020
ggtggggccg tcctgtctat cctggatgag atggagaatg tgtttgtctg ggagcacctg
4080

cagagctatg agggccagag tcggggcgcc tggctgggca tgaacttcaa ccccaaagga
4140
ggcactctgg tctggcagga caacacagct gtgaactact ccaactgggg gccccgggc
4200
ttgggccccca gcatgctgag ccacaacagc tgctactgga ttcagagcaa cagcgggcta
4260
tggcgccccg gcgcttgac caacatcacc atgggtgtcg tctgcaagct tcctcgtgct
4320
gagcagagca gcttctcccc atcagcgctt ccagagaacc cagcggccct ggtggtggtg
4380
ctgatggcgg tgctgctgct cctggccttg ctgaccgcag ccctcatcct ttaccggagg
4440
cgccagagca tcgagcgcgg ggcttttgag ggtgcccgt acagccgcag cagctccagc
4500
cccaccgagg ccactgagaa gaacatcctg gtgtcagaca tggaaatgaa tgagcagcaa
4560
gaatagagcc aggcgcgtgg gcagggccag ggcgggagga gctggggagc tggggccctg
4620
ggtcagtctg gccccccacc agctgcctgt ccagttggcc tattgaaggg tgcccttggg
4680
agtgcgtgtt gggagccgga gctgggcaga gcctgggctg gtgggggtgcc accctccac
4740
aagggtctgg ctgagacca gcaaagagca gcgtggcgct tccctttctg ggggggcctg
4800
aggtcttgtc acctggtcct gtgccccac aggaaccaga ggtaggatgg gagggggaac
4860
gagagcctct ttctccccag agccccggc ccaggcctgt tgatccgcgc ccaggaccc
4920
ccttctttgc agagcccgag gagcctcccc tgtcccctcg ggcagatctg ttgtgtctct
4980
cttccacct ggcagcctca gctctgtgcc cctcaccctg ctccctctcg ccccttctct
5040
cccaccctt ccttctgagc cgggccctgg ggattgggga gccctcttgt tcctgatgag
5100
ggtcagctga gggggctgag catccatcac tcctgtgcct gctgggggtg ctgtggggcg
5160
tggcaggagg ggcctaggtg ggttgggcct gagaaccagg gcacgggtgt ggtgtctgct
5220
gggctggaga taagactggg gagagacacc ccaacctccc aggggtgggag ctgggcccggg
5280
ctgggatgtc atctcctgcc gggcggggga gggctctgcc cctggaagag tcccctgtgg
5340
ggacaaaaat aagttcccta acatctccag ctccctggctc tggtttggag caaggggaag
5400
ggttgccaga gtccctggggg cccagagga gcaggagtct gggagggcc agagttcacc
5460
ctctagtgga tccaggagga gcagcaccgc agccctggag tggcccagta cccttccaag
5520
aggccacagt cccagccagg acaaagtatg cggcccatcc tgggtgcgaca gcgtgggaca
5580
atgtgaacat ggactcgaag acatggccct ttctctgtag ttgatttttt aaatgtgcca
5640
ttattgtttt taaaaaaaaa ggaaaaaaga aaagcaaaca aataaaacac ctttaagagg
5700

cttgaagaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
5747

<210> 5830

<211> 1479

<212> PRT

<213> Homo sapiens

<400> 5830

```

Met Gly Pro Gly Arg Pro Ala Pro Ala Pro Trp Pro Arg His Leu Leu
 1           5           10           15
Arg Cys Val Leu Leu Leu Gly Cys Leu His Leu Gly Arg Pro Gly Ala
      20           25           30
Pro Gly Asp Ala Ala Leu Pro Glu Pro Asn Val Phe Leu Ile Phe Ser
      35           40           45
His Gly Leu Gln Gly Cys Leu Glu Ala Gln Gly Gly Gln Val Arg Val
      50           55           60
Thr Pro Ala Cys Asn Thr Ser Leu Pro Ala Gln Arg Trp Lys Trp Val
65           70           75           80
Ser Arg Asn Arg Leu Phe Asn Leu Gly Thr Met Gln Cys Leu Gly Thr
      85           90           95
Gly Trp Pro Gly Thr Asn Thr Thr Ala Ser Leu Gly Met Tyr Glu Cys
      100          105          110
Asp Arg Glu Ala Leu Asn Leu Arg Trp His Cys Arg Thr Leu Gly Asp
      115          120          125
Gln Leu Ser Leu Leu Leu Gly Ala Arg Thr Ser Asn Ile Ser Lys Pro
      130          135          140
Gly Thr Leu Glu Arg Gly Asp Gln Thr Arg Ser Gly Gln Trp Arg Ile
145          150          155          160
Tyr Gly Ser Glu Glu Asp Leu Cys Ala Leu Pro Tyr His Glu Val Tyr
      165          170          175
Thr Ile Gln Gly Asn Ser His Gly Lys Pro Cys Thr Ile Pro Phe Lys
      180          185          190
Tyr Asp Asn Gln Trp Phe His Gly Cys Thr Ser Thr Gly Arg Glu Asp
      195          200          205
Gly His Leu Trp Cys Ala Thr Thr Gln Asp Tyr Gly Lys Asp Glu Arg
      210          215          220
Trp Gly Phe Cys Pro Ile Lys Ser Asn Asp Cys Glu Thr Phe Trp Asp
225          230          235          240
Lys Asp Gln Leu Thr Asp Ser Cys Tyr Gln Phe Asn Phe Gln Ser Thr
      245          250          255
Leu Ser Trp Arg Glu Ala Trp Ala Ser Cys Glu Gln Gln Gly Ala Asp
      260          265          270
Leu Leu Ser Ile Thr Glu Ile His Glu Gln Thr Tyr Ile Asn Gly Leu
      275          280          285
Leu Thr Gly Tyr Ser Ser Thr Leu Trp Ile Gly Leu Asn Asp Leu Asp
      290          295          300
Thr Ser Gly Gly Trp Gln Trp Ser Asp Asn Ser Pro Leu Lys Tyr Leu
305          310          315          320
Asn Trp Glu Ser Asp Gln Pro Asp Asn Pro Ser Glu Glu Asn Cys Gly
      325          330          335
Val Ile Arg Thr Glu Ser Ser Gly Gly Trp Gln Asn Arg Asp Cys Ser
      340          345          350
Ile Ala Leu Pro Tyr Val Cys Lys Lys Lys Pro Asn Ala Thr Ala Glu

```

4997

| | | | | | | |
|-------------------------|---|---------------------|---------|-----|--|-----|
| 785 | | 790 | | 795 | | 800 |
| Asp Thr Gln Leu | Asp Trp Ile Cys Lys | Ile Pro Arg Gly Thr | Asp Val | | | |
| | 805 | 810 | 815 | | | |
| Arg Glu Pro Asp | Asp Ser Pro Gln Gly Arg Arg Glu Trp | Leu Arg Phe | | | | |
| | 820 | 825 | 830 | | | |
| Gln Glu Ala Glu | Tyr Lys Phe Phe Glu His His Ser Thr | Trp Ala Gln | | | | |
| | 835 | 840 | 845 | | | |
| Ala Gln Arg Ile Cys | Thr Trp Phe Gln Ala Glu Leu Thr | Ser Val His | | | | |
| | 850 | 855 | 860 | | | |
| Ser Gln Ala Glu Leu | Asp Phe Leu Ser His Asn Leu Gln Lys Phe | Ser | | | | |
| 865 | 870 | 875 | 880 | | | |
| Arg Ala Gln Glu Gln | His Trp Trp Ile Gly Leu His Thr Ser Glu | Ser | | | | |
| | 885 | 890 | 895 | | | |
| Asp Gly Arg Phe | Arg Trp Thr Asp Gly Ser Ile Ile Asn Phe | Ile Ser | | | | |
| | 900 | 905 | 910 | | | |
| Trp Ala Pro Gly Lys | Pro Arg Pro Val Gly Lys Asp Lys Lys Cys | Val | | | | |
| | 915 | 920 | 925 | | | |
| Tyr Met Thr Ala Ser | Arg Glu Asp Trp Gly Asp Gln Arg Cys Leu Thr | | | | | |
| | 930 | 935 | 940 | | | |
| Ala Leu Pro Tyr Ile Cys | Lys Arg Ser Asn Val Thr Lys Glu Thr Gln | | | | | |
| 945 | 950 | 955 | 960 | | | |
| Pro Pro Asp Leu Pro | Thr Thr Ala Leu Gly Gly Cys Pro Ser Asp Trp | | | | | |
| | 965 | 970 | 975 | | | |
| Ile Gln Phe Leu Asn | Lys Cys Phe Gln Val Gln Gly Gln Glu Pro Gln | | | | | |
| | 980 | 985 | 990 | | | |
| Ser Arg Val Lys Trp | Ser Glu Ala Gln Phe Ser Cys Glu Gln Gln Glu | | | | | |
| | 995 | 1000 | 1005 | | | |
| Ala Gln Leu Val Thr | Ile Thr Asn Pro Leu Glu Gln Ala Phe Ile Thr | | | | | |
| | 1010 | 1015 | 1020 | | | |
| Ala Ser Leu Pro Asn | Val Thr Phe Asp Leu Trp Ile Gly Leu His Ala | | | | | |
| 1025 | 1030 | 1035 | 1040 | | | |
| Ser Gln Arg Asp Phe | Gln Trp Val Glu Gln Glu Pro Leu Met Tyr Ala | | | | | |
| | 1045 | 1050 | 1055 | | | |
| Asn Trp Ala Pro Gly | Glu Pro Ser Gly Pro Ser Pro Ala Pro Ser Gly | | | | | |
| | 1060 | 1065 | 1070 | | | |
| Asn Lys Pro Thr Ser | Cys Ala Val Val Leu His Ser Pro Ser Ala His | | | | | |
| | 1075 | 1080 | 1085 | | | |
| Phe Thr Gly Arg Trp | Asp Asp Arg Ser Cys Thr Glu Glu Thr His Gly | | | | | |
| | 1090 | 1095 | 1100 | | | |
| Phe Ile Cys Gln Lys | Gly Thr Asp Pro Ser Leu Ser Pro Ser Pro Ala | | | | | |
| 1105 | 1110 | 1115 | 1120 | | | |
| Ala Leu Pro Pro Ala | Pro Gly Thr Glu Leu Ser Tyr Leu Asn Gly Thr | | | | | |
| | 1125 | 1130 | 1135 | | | |
| Phe Arg Leu Leu Gln | Lys Pro Leu Arg Trp His Asp Ala Leu Leu Leu | | | | | |
| | 1140 | 1145 | 1150 | | | |
| Cys Glu Ser His Asn | Ala Ser Leu Ala Tyr Val Pro Asp Pro Tyr Thr | | | | | |
| | 1155 | 1160 | 1165 | | | |
| Gln Ala Phe Leu Thr | Gln Ala Ala Arg Gly Leu Arg Thr Pro Leu Trp | | | | | |
| | 1170 | 1175 | 1180 | | | |
| Ile Gly Leu Ala Gly | Glu Glu Gly Ser Arg Arg Tyr Ser Trp Val Ser | | | | | |
| 1185 | 1190 | 1195 | 1200 | | | |
| Glu Glu Pro Leu Asn | Tyr Val Gly Trp Gln Asp Gly Glu Pro Gln Gln | | | | | |
| | 1205 | 1210 | 1215 | | | |
| Pro Gly Gly Cys Thr | Tyr Val Asp Val Asp Gly Ala Trp Arg Thr Thr | | | | | |

1220 1225 1230
 Ser Cys Asp Thr Lys Leu Gln Gly Ala Val Cys Gly Val Ser Ser Gly
 1235 1240 1245
 Pro Pro Pro Pro Arg Arg Ile Ser Tyr His Gly Ser Cys Pro Gln Gly
 1250 1255 1260
 Leu Ala Asp Ser Ala Trp Ile Pro Phe Arg Glu His Cys Tyr Ser Phe
 1265 1270 1275 1280
 His Met Glu Leu Leu Leu Gly His Lys Glu Ala Arg Gln Arg Cys Gln
 1285 1290 1295
 Arg Ala Gly Gly Ala Val Leu Ser Ile Leu Asp Glu Met Glu Asn Val
 1300 1305 1310
 Phe Val Trp Glu His Leu Gln Ser Tyr Glu Gly Gln Ser Arg Gly Ala
 1315 1320 1325
 Trp Leu Gly Met Asn Phe Asn Pro Lys Gly Gly Thr Leu Val Trp Gln
 1330 1335 1340
 Asp Asn Thr Ala Val Asn Tyr Ser Asn Trp Gly Pro Pro Gly Leu Gly
 1345 1350 1355 1360
 Pro Ser Met Leu Ser His Asn Ser Cys Tyr Trp Ile Gln Ser Asn Ser
 1365 1370 1375
 Gly Leu Trp Arg Pro Gly Ala Cys Thr Asn Ile Thr Met Gly Val Val
 1380 1385 1390
 Cys Lys Leu Pro Arg Ala Glu Gln Ser Ser Phe Ser Pro Ser Ala Leu
 1395 1400 1405
 Pro Glu Asn Pro Ala Ala Leu Val Val Val Leu Met Ala Val Leu Leu
 1410 1415 1420
 Leu Leu Ala Leu Leu Thr Ala Ala Leu Ile Leu Tyr Arg Arg Arg Gln
 1425 1430 1435 1440
 Ser Ile Glu Arg Gly Ala Phe Glu Gly Ala Arg Tyr Ser Arg Ser Ser
 1445 1450 1455
 Ser Ser Pro Thr Glu Ala Thr Glu Lys Asn Ile Leu Val Ser Asp Met
 1460 1465 1470
 Glu Met Asn Glu Gln Gln Glu
 1475

<210> 5831

<211> 2216

<212> DNA

<213> Homo sapiens

<400> 5831

nntccccgtt tattcatctt tgggttcgtat ttctcgatct tacaagttcg taggtttgag
 60
 aaagaacagg aaaaggtgtc ttctcacaaa taacatgtgc tggagatgac aacttattga
 120
 actcttaagt tctcagcact atgttatgca cttgacgggc attactttaa tcttccactg
 180
 tgagatactt gttattgcct cattttgtag acgagaaaac gggcatagag ggtgagacat
 240
 tggcccaggt tcattccgta agggttggag cctggaattc agatacagga ggaagttaac
 300
 atccctaata ggagggttct gggtactggg gccactgggc ttcttggcag agctgtacac
 360
 aaagaatttc agcagaataa ttggcatgca gttggctgtg gtttcagaag agcaagacca
 420

aaatttgaac aggttaatct gttggattct aatgcagttc atcacatcat tcatgatttt
480
cagcccatg ttatagtaca ttgtgcagca gagagaagac cagatgttgt agaaaatcag
540
ccagatgctg cctctcaact taatgtggat gcttctggga atttagcaaa ggaagcagct
600
gctgttggag catttctcat ctacattagc tcagattatg tatttgatgg aacaaatcca
660
ccttacagag aggaagacat accagctccc cttaaattgt atggcaaaac aaaattagat
720
ggagaaaagg ctgtcctgga gaacaatcta ggagctgctg ttttgaggat tcctattctg
780
tatggggaag ttgaaaagct cgaagaaagt gctgtgactg ttatgtttga taaagtgcag
840
ttcagcaaca agtcagcaaa catggatcac tggcagcaga ggttccccac acatgtcaaa
900
gatgtggcca ctgtgtgccc gcagctagca gagaagagaa tgctggatcc atcaattaag
960
ggaacctttc actggctctgg caatgaacag atgactaagt atgaaatggc atgtgcaatt
1020
gcagatgcct tcaacctccc cagcagtcac ttaagaccta ttactgacag cctgtccta
1080
ggagcacaac gtccgagaaa tgctcagctt gactgctcca aattggagac cttgggcatt
1140
ggccaacgaa caccatttcg aattggaatc aaagaatcac tttggccttt cctcattgac
1200
aagagatgga gacaaacggt ctttcattag tttatttctg ttgggttctt tttttttttt
1260
aatgaaaag tatagtatgt ggcacttttt aaagaacaaa ggaaatagtt ttgtatgagt
1320
actttaattg tgactcttag gatctttcag gtaaataatg ctcttgcaat agtgaaattg
1380
tctaaagaaa ctaaagggca gtcattgcct gtttgagta atttttcttt ttatcatttt
1440
gtttgtcctg gctaaacttg gagtttgagt atagtaaatt atgaccta aatatttgag
1500
agtcaggatg aagcagatct gctgtagact tttcagatga aattgttcat tctcgtaacc
1560
tccatatttt caggattttt gaagctgttg accttttcat gttgattatt ttaaattgtg
1620
tgaaatagta taaaaatcat tgggtgttcat tatttgcttt gcctgagctc agatcaaaat
1680
gtttgaagaa aggaacttta tttttgcaag ttacgtacag tttttatgct tgagatattt
1740
caacatgtta tgtatatttg aacttctaca gcttgatgcc tcctgctttt atagcagttt
1800
atggggagca cttgaaagag cgtgtgtaca tgtatttttt ttctaggcaa acattgaatg
1860
caaacgtgta tttttttaat ataaatatat aactgtcctt ttcattccat gttgccgcta
1920
agtatatatt catatgtgtg gttatactca taataatggg ccttgtaagt cttttcacca
1980
ttcatgaata ataataaata tgtactgctg gcatgtaatg cttagttttt ttgtatttac
2040

ttctttttttt aaatgtaagg accaaacttc taaactaatt gttcttttgt tgctttaatt
 2100
 ttttaaaaatt acattcttct gatgtaacat gtgatacata caaaagaata tagttttaata
 2160
 tgtattgaaa taaaacacaa taaaattaac acttgaaaaa aaaaaaaaaa aaaaaa
 2216

<210> 5832

<211> 322

<212> PRT

<213> Homo sapiens

<400> 5832

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Glu | Pro | Gly | Ile | Gln | Ile | Gln | Glu | Glu | Val | Asn | Ile | Pro | Asn |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Arg | Arg | Val | Leu | Val | Thr | Gly | Ala | Thr | Gly | Leu | Leu | Gly | Arg | Ala | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Lys | Glu | Phe | Gln | Gln | Asn | Asn | Trp | His | Ala | Val | Gly | Cys | Gly | Phe |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Arg | Arg | Ala | Arg | Pro | Lys | Phe | Glu | Gln | Val | Asn | Leu | Leu | Asp | Ser | Asn |
| | | 50 | | | | 55 | | | | | | 60 | | | |
| Ala | Val | His | His | Ile | Ile | His | Asp | Phe | Gln | Pro | His | Val | Ile | Val | His |
| 65 | | | | 70 | | | | | | 75 | | | | 80 | |
| Cys | Ala | Ala | Glu | Arg | Arg | Pro | Asp | Val | Val | Glu | Asn | Gln | Pro | Asp | Ala |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Ala | Ser | Gln | Leu | Asn | Val | Asp | Ala | Ser | Gly | Asn | Leu | Ala | Lys | Glu | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ala | Ala | Val | Gly | Ala | Phe | Leu | Ile | Tyr | Ile | Ser | Ser | Asp | Tyr | Val | Phe |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Asp | Gly | Thr | Asn | Pro | Pro | Tyr | Arg | Glu | Glu | Asp | Ile | Pro | Ala | Pro | Leu |
| | | 130 | | | | 135 | | | | | 140 | | | | |
| Asn | Leu | Tyr | Gly | Lys | Thr | Lys | Leu | Asp | Gly | Glu | Lys | Ala | Val | Leu | Glu |
| 145 | | | | 150 | | | | | | 155 | | | | 160 | |
| Asn | Asn | Leu | Gly | Ala | Ala | Val | Leu | Arg | Ile | Pro | Ile | Leu | Tyr | Gly | Glu |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Val | Glu | Lys | Leu | Glu | Glu | Ser | Ala | Val | Thr | Val | Met | Phe | Asp | Lys | Val |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Gln | Phe | Ser | Asn | Lys | Ser | Ala | Asn | Met | Asp | His | Trp | Gln | Gln | Arg | Phe |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Pro | Thr | His | Val | Lys | Asp | Val | Ala | Thr | Val | Cys | Arg | Gln | Leu | Ala | Glu |
| | | 210 | | | | 215 | | | | | 220 | | | | |
| Lys | Arg | Met | Leu | Asp | Pro | Ser | Ile | Lys | Gly | Thr | Phe | His | Trp | Ser | Gly |
| 225 | | | | 230 | | | | | | 235 | | | | 240 | |
| Asn | Glu | Gln | Met | Thr | Lys | Tyr | Glu | Met | Ala | Cys | Ala | Ile | Ala | Asp | Ala |
| | | | 245 | | | | | 250 | | | | | 255 | | |
| Phe | Asn | Leu | Pro | Ser | Ser | His | Leu | Arg | Pro | Ile | Thr | Asp | Ser | Pro | Val |
| | | 260 | | | | | | 265 | | | | | 270 | | |
| Leu | Gly | Ala | Gln | Arg | Pro | Arg | Asn | Ala | Gln | Leu | Asp | Cys | Ser | Lys | Leu |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Glu | Thr | Leu | Gly | Ile | Gly | Gln | Arg | Thr | Pro | Phe | Arg | Ile | Gly | Ile | Lys |
| | | 290 | | | | 295 | | | | | 300 | | | | |
| Glu | Ser | Leu | Trp | Pro | Phe | Leu | Ile | Asp | Lys | Arg | Trp | Arg | Gln | Thr | Val |
| 305 | | | | | 310 | | | | | 315 | | | | 320 | |
| Phe | His | | | | | | | | | | | | | | |

<210> 5833
 <211> 805
 <212> DNA
 <213> Homo sapiens

<400> 5833
 aagcttgcag cagcacaggg acaggcaccc ttggagccca cccaagatgg gagtgccatt
 60
 gaaacatgtc caaaaggaga cgagccaaga ggtgacgagc aacaggtgga aagtatgacc
 120
 cctaaacctg tgctccagga agaaaacaac caagagtctt ttattgcatt tgctcgggtg
 180
 ttcagtgggtg tggctcgaag aggaaagaaa atttttgtct tggggcccaa atacagtcct
 240
 cttgagtttt tacgaagggg accattaggg ttctcagctc caccagatgg cctcccccaa
 300
 gtccccaca tggcatactg tgctctggaa aacctgtatc ttctgatggg aagggaactg
 360
 gaatatctag aggaggtacc tccaggaaat gtgctaggaa taggaggcct tcaagatttt
 420
 gtgctgaaat ctgcaacact gtgtagcctg ccacctgcc caccatttat accactcaac
 480
 ttcgaagcca ctctatttgt gagagttgct gttgaaccaa aacatccaag tgaaatgcct
 540
 cagctcgtaa aaggaatgaa actgttaaac caggctgatc cctgtgtcca gattttaatt
 600
 caggaaacgg gagagcacgt tttagtcaca gcaggagaag tccaccttca gcgatgcctg
 660
 gatgacttaa aagaaagggt tgcaaagatt catatcagtg tatctgaacc tattattcca
 720
 ttcagagaaa caatcacaaa accccccaaa gttgacatgg tcaatgaaga aataggcaaa
 780
 cagcaaaaag ttgcagtcac acacc
 805

<210> 5834
 <211> 268
 <212> PRT
 <213> Homo sapiens

<400> 5834
 Lys Leu Ala Ala Gln Gly Gln Ala Pro Leu Glu Pro Thr Gln Asp
 1 5 10 15
 Gly Ser Ala Ile Glu Thr Cys Pro Lys Gly Asp Glu Pro Arg Gly Asp
 20 25 30
 Glu Gln Gln Val Glu Ser Met Thr Pro Lys Pro Val Leu Gln Glu Glu
 35 40 45
 Asn Asn Gln Glu Ser Phe Ile Ala Phe Ala Arg Val Phe Ser Gly Val
 50 55 60
 Ala Arg Arg Gly Lys Lys Ile Phe Val Leu Gly Pro Lys Tyr Ser Pro
 65 70 75 80
 Leu Glu Phe Leu Arg Arg Val Pro Leu Gly Phe Ser Ala Pro Pro Asp

```
<210> 5835
<211> 420
<212> DNA
<213> Homo sapiens
```

```
<210> 5836
<211> 140
<212> PRT
<213> Homo sapiens
```

```
<400> 5836
Xaa Leu Glu Gln Arg Trp Gly Phe Gly Leu Glu Glu Leu Tyr Gly Leu
  1                      5              10              15
Ala Leu Arg Phe Phe Lys Glu Lys Asp Gly Lys Ala Phe His Pro Thr
```

```

<400> 5838
Xaa Arg Leu Ser Pro Phe Leu Pro His Asp His Leu Gly Leu Ala Val
  1             5             10             15
Phe Ser Met Leu Cys Cys Phe Trp Pro Val Gly Ile Ala Ala Phe Cys
          20             25             30
Leu Ala Gln Lys Thr Asn Lys Ala Trp Ala Lys Gly Asp Ile Gln Gly

```

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 35 | | 40 | | 45 | | | | | | | | | | |
| Ala | Gly | Ala | Ala | Ser | Arg | Arg | Ala | Phe | Leu | Leu | Gly | Val | Leu | Ala | Val |
| | 50 | | | | 55 | | | | | | 60 | | | | |
| Gly | Leu | Gly | Val | Cys | Thr | Tyr | Ala | Ala | Ala | Leu | Val | Thr | Leu | Ala | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Tyr | Leu | Ala | Ser | Arg | Asp | Pro | Pro | | | | | | | | |
| | | | 85 | | | | | | | | | | | | |

<210> 5839
 <211> 1895
 <212> DNA
 <213> Homo sapiens

<400> 5839
 tttttttttt tttaacaata aaatagctct ttgtttattc actttgattt ggatcattgg
 60
 aaatattaaa caataaataa aacagagcgg gggctgagga aagcaggatc ttgctgaagt
 120
 cattcgaatg catcccaacc agtgctcagc tgcgtaacga catggagaga ggcagggggg
 180
 aatagaaagc aaatttaaaa acaccaacac ccaaacacac aagactgcac acaagaaaaa
 240
 gtgctcaaga aactttggct ttgaaggga ttcagtgaag ggaagcgatt gtgcaggagg
 300
 aaggaagaa acccacgac accctaagg ggggggggct ggagggcgag gccctgagac
 360
 aggctagggt taaagctgac gtccacagc tcaggacgta caaccgatgg cagttttgta
 420
 cttagaagaa gctgagtgat gaggctgggt gatgggatcg cttgacgggc tgggagggag
 480
 gacaggaggt gtaaagggtg ctcaccttcc cctaggaaat tcagtgtctt tttggtaaga
 540
 aaaaatagtc ggtaatgcc tgatcctgac aagctgtgag atgctgtctt gcctgtctct
 600
 gccttttctt ctaagttttc ctcttttct ttgcacaggt gtcaggtagc accccagggg
 660
 tgcaggagct ggtgttttca tgacaaacaa aaatggggag gttgactcta tctcaaaact
 720
 agctagccca gtccacaggg caggataatc ctgatggcgt gtagccacat ttgctgcaaa
 780
 ccagatgtct gcgatggata taatgatacc cccggggctc ttctcagggg tgaggacagg
 840
 tgctggttcc tgatgggtgca tggctgggtg ccagtcactt ttagctgggc agtggccct
 900
 cgaggctcgg gcttccctgc acaaggatt tttgatcctt gccagcggag ggagagagag
 960
 ttatcttggt ttctttttca cttgttttgc ggtgcttca aagcaaact cccagttcca
 1020
 aatgttcttt gtggtttgaa tcctggcaga ggccagggtc acatccaagt gggactggcc
 1080
 tctagcacca cttcttggtc acagcagaga atgggattcc atcaaagcct ctcaaccagc
 1140
 cgtttcccta aagaatcacc cagatcttaa ctgccctctc caccttcttt tttttcccc
 1200

tcctatttta cattctatatt tctcatatcc agctttttctc tctaagccta accaaatgct
 1260
 ttgggtgaatg atgcttgga aagctggagt tttaaaaggc attcatccat ttatgaactt
 1320
 tcttcagcc caggatccct gcagagaacc agagggttaca aatctgccct cctttctccc
 1380
 ctaaaagggtg gctgagggga ggagagggtgc atgtagctcc agctatagca aatcagtgcc
 1440
 ctgactcact ggggagaccc aggggggttg gatgttgctg acacctcatg ggccacctca
 1500
 tcagcccatc tttgtagctt cagggttcagc tctgggtgct gcaggcaggg acccctctgc
 1560
 tccctgcctg aatgcagggc cagtctccaa ggaactctgt ctgcagagta gaaagagctg
 1620
 tgggctggga atcaggggccc tgaggagacc cctgccactg cctgcccaga accagtgtc
 1680
 ctcatctccc tgctgacagc atgcatgtgc cttttggcta acacacactc ttgtctaatt
 1740
 cccagccacc ttcaccccag ggatgagttc cagttggttt aagccagact ggtgcattta
 1800
 attctggctg caacaactgg attctgttaa gtgccattg ctaagccaat gagctatctg
 1860
 ctgggctgtg ggaaagagaa atgcagtctc ntata
 1895

<210> 5840

<211> 138

<212> PRT

<213> Homo sapiens

<400> 5840

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Cys | Ser | His | Ile | Cys | Cys | Lys | Pro | Asp | Val | Cys | Asp | Gly | Tyr |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Asn | Asp | Thr | Pro | Gly | Ala | Leu | Leu | Arg | Gly | Glu | Asp | Arg | Cys | Trp | Phe |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Met | Val | His | Gly | Trp | Cys | Pro | Val | Ile | Phe | Ser | Trp | Ala | Val | Ala |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Pro | Arg | Gly | Ser | Gly | Phe | Pro | Ala | Gln | Gly | Ile | Phe | Asp | Pro | Cys | Gln |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Arg | Arg | Glu | Arg | Glu | Leu | Ser | Trp | Phe | Pro | Phe | His | Leu | Phe | Ser | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Cys | Phe | Lys | Ala | Asn | Ile | Pro | Val | Pro | Asn | Val | Leu | Cys | Gly | Leu | Asn |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Pro | Gly | Arg | Gly | Gln | Gly | His | Ile | Gln | Val | Gly | Leu | Ala | Ser | Ser | Thr |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Thr | Phe | Trp | Pro | Gln | Gln | Arg | Met | Gly | Phe | His | Gln | Ser | Leu | Ser | Thr |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Ser | Arg | Phe | Pro | Lys | Glu | Ser | Pro | Arg | Ser | | | | | | |
| | | | 130 | | | | 135 | | | | | | | | |

<210> 5841

<211> 3411

<212> DNA

<213> Homo sapiens

<400> 5841

ngggccttct ggtggacctc cactcccacg cggggcgggg tgcaggtggc gaagtggaaa
60
tggaggcggg agatggaacg cccccaccct cctcgcacac tttggggcca tgaaaaccca
120
ttctcggacc ttcccagcgg caccctcaat tttcaccggg tgtggacatc tcgaacttgc
180
tcccgccac cttctgtct ctctcaaata gtacagctta aagcaataaa tgtagatctt
240
caaagtgatg ctgctctgca ggtggacatt tctgatgctc ttagtgagcg ggataaagta
300
aaattcactg ttcacacaaa gagttcattg ccaaatttta aacaaaacga gttttcagtt
360
gttcggcaac atgaggaatt tatctggctt catgattcct ttgttgaaaa tgaagactat
420
gcaggttata tcattccacc agcaccacca agacctgatt ttgatgcttc aagggaaaaa
480
ctacagaagc ttggtgaagg agaagggtca atgacgaagg aagaattcac aaagatgaaa
540
caggaactgg aagctgaata tttggcaata ttcaagaaga cagttgcat gcatgaagtg
600
ttcctgtgtc gtgtggcagc acatcctatt ttgagaagag atttaaattt ccatgtcttc
660
ttggaatata atcaagattt gagtgtgcga ggaaaaaata aaaaagagaa acttgaagac
720
ttctttaaaa acatgggttaa atcagcagat ggagtaatcg tttcaggagt aaaggatgta
780
gatgatttct ttgagcacga acgaacattt cttttggaat atcataaccg agttaaggat
840
gcatctgcta aatctgatag aatgacaaga tcccacaaaa gtgctgcaga tgattacaat
900
agaattgggt cttcattata tgcttttaga actcaggatt ctacagatat atgcaagttt
960
tttctcaaag tttcagaact gttcgataaa acaagaaaaa tagaagcacg agtgtctgct
1020
gatgaagacc tcaaactttc tgatctttta aaatattact taagagaatc tcaagctgct
1080
aaggatctcc tgtatcgaag gtctaggtca ctagtggatt atgaaaatgc taataaagca
1140
ctggataaag caagagcaaa aaataaagat gttctacagg ccgaaacttc ccaacaatta
1200
tgttgtcaga aatttgaaaa aatatctgag tctgcaaaac aagaacttat agattttaag
1260
acaagaagag ttgctgcatt cagaaaaaat ttagtggaac tggcagagtt agaactgaag
1320
catgcaaagg gtaatctaca gttgctgcag aactgcctgg cagtgttaaa tggagacaca
1380
taagccacac tccgccttcc tgttaaaaag ggctgccttc cttcaaattt tatttttgtt
1440
ttcttaatga tgtaagcat ttatgtcac tggaaacaaa caaaaagcag ctgaaaaagt
1500
gcatcaactc ctctttttct gagaaacatg gagcagcgca cggccaggcg atgccagttc
1560

gtgtgccgtg atgccgcact gtgttcccca tgacagtggc ccatcatcgt gcactcgtca
1620
tactcagaag tccaaagtcc attcttcttt aaagtagcct ctataactct gtttatctta
1680
taaatagtat tccttatggc tgccactctt atttaccttt aaataatttc tgaaatttaa
1740
ccttttcaga atgcattggt gaaacaagat aaagattgcc ttttttgaat tttttaaatt
1800
ttgtttttta aagcatatac caccttagtt cattcatgta tcctggtaaa gcactttaat
1860
cagacttatt tttaattact gaatatttct tagacgtttt gggacagatt ttatgtaac
1920
tttataagta tgatttctga agaaaagcaa atgcattagt atgtttgcct taaacttgta
1980
gactaaacca agtattgtta aataaacagc gataacagt atagttttta actctatggt
2040
cattgtatca ctctggaaaa tgtggagtag ctgtaataaa tctactcctg tattatgctt
2100
tacagtgcag gtcttagttt ttcttttttc tcatttcttt tgaaatggca tctcgaacaa
2160
agtccacca tccctttaca aaagaatgaa ctgctcctct gtgtgtactt catagaaggt
2220
ggaatcggac agaggcaggt tagtgacagt tattcctgaa atacaggagc agagtacagt
2280
ctgttggtt ttcccggatt ccgcgcctag ctccagccaat taagcatgag acataggcca
2340
ttgagccact tagtagttat gcgagtggat agattggtat gtagagggaa agaggctctgc
2400
tgtaaagaac aacacttggt tgtctgtggg gaaagaaaag cagaatactt gagatgaaag
2460
ttggcataca aataggatac tatcgccagt agttatatta caaacattat cggcctttct
2520
agtgtgaatg aacattagac acattattgt cattcctagt ttaaagttaa ggttgcgtag
2580
ttggattttt ccactatctt tttctaattt ttctaccatt tggagaccgt aggcatttgg
2640
gcctgtcacc ccttggatgg gttcctagtt tgtttacatt ttctgaacc ctctgagcg
2700
cccgttcttg gtctaattcc cagtcgtgat gattccacac ttctcagcc gcattgtgtc
2760
ttgcctcatt catgagctgg tcagcgtttc gtctctttaa ctgacatgtt cccagtgct
2820
gtttgaaactg ttgagtttcc gttgctggct gagtgcggtt tgtccttcac gtaaccttcg
2880
ctggtaaaaa taagcccatg tgatgtccac cagtggatga atgctggacc gagagcccta
2940
gcttctggat ccaggcttag gcccttcac tgctgctctg tggcccaggg cagggttgc
3000
tgacctctgc ctgattctc gactctaaag gacatactga cctacctcac aggggtgttg
3060
tgaggattaa taaatgttgg tactctgctt tggaaatgtg aaaatgctgt gtaaattgta
3120
agaaatacta agtatagggc cagaagctat acagtgttcc acttaaccgt ttgccattct
3180

gtattttacca aggtggtctt ttctggggaa ggaagtagag tggaaggtgc atcccttggc
 3240
 ccctgggttta cattattagg gtgcttattg taggaatgca ctctaaaaag tgggcgtaga
 3300
 atgaaagcag ccgctccagt gtcctccctt ttctgtagtt tcacttttct tgcttcaagt
 3360
 tacagcagtc acctgaaatc tgaaaataact aaatgaaaaa ctccagaaac a
 3411

<210> 5842

<211> 460

<212> PRT

<213> Homo sapiens

<400> 5842

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Phe | Trp | Trp | Thr | Ser | Thr | Pro | Thr | Arg | Gly | Gly | Val | Gln | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Lys | Trp | Lys | Trp | Arg | Arg | Glu | Met | Glu | Arg | Pro | His | Pro | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Leu | Trp | Gly | His | Glu | Asn | Pro | Phe | Ser | Asp | Leu | Pro | Ser | Gly | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Asn | Phe | His | Pro | Val | Trp | Thr | Ser | Arg | Thr | Cys | Ser | Arg | Pro | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Phe | Cys | Leu | Ser | Gln | Ile | Val | Gln | Leu | Lys | Ala | Ile | Asn | Val | Asp | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Gln | Ser | Asp | Ala | Ala | Leu | Gln | Val | Asp | Ile | Ser | Asp | Ala | Leu | Ser | Glu |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Arg | Asp | Lys | Val | Lys | Phe | Thr | Val | His | Thr | Lys | Ser | Ser | Leu | Pro | Asn |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Phe | Lys | Gln | Asn | Glu | Phe | Ser | Val | Val | Arg | Gln | His | Glu | Glu | Phe | Ile |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Trp | Leu | His | Asp | Ser | Phe | Val | Glu | Asn | Glu | Asp | Tyr | Ala | Gly | Tyr | Ile |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ile | Pro | Pro | Ala | Pro | Pro | Arg | Pro | Asp | Phe | Asp | Ala | Ser | Arg | Glu | Lys |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Leu | Gln | Lys | Leu | Gly | Glu | Gly | Glu | Gly | Ser | Met | Thr | Lys | Glu | Glu | Phe |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Thr | Lys | Met | Lys | Gln | Glu | Leu | Glu | Ala | Glu | Tyr | Leu | Ala | Ile | Phe | Lys |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Lys | Thr | Val | Ala | Met | His | Glu | Val | Phe | Leu | Cys | Arg | Val | Ala | Ala | His |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Pro | Ile | Leu | Arg | Arg | Asp | Leu | Asn | Phe | His | Val | Phe | Leu | Glu | Tyr | Asn |
| | 210 | | | | | 215 | | | | | | 220 | | | |
| Gln | Asp | Leu | Ser | Val | Arg | Gly | Lys | Asn | Lys | Lys | Glu | Lys | Leu | Glu | Asp |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | |
| Phe | Phe | Lys | Asn | Met | Val | Lys | Ser | Ala | Asp | Gly | Val | Ile | Val | Ser | Gly |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Val | Lys | Asp | Val | Asp | Asp | Phe | Phe | Glu | His | Glu | Arg | Thr | Phe | Leu | Leu |
| | | 260 | | | | | | 265 | | | | | 270 | | |
| Glu | Tyr | His | Asn | Arg | Val | Lys | Asp | Ala | Ser | Ala | Lys | Ser | Asp | Arg | Met |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Thr | Arg | Ser | His | Lys | Ser | Ala | Ala | Asp | Asp | Tyr | Asn | Arg | Ile | Gly | Ser |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Ser | Leu | Tyr | Ala | Leu | Gly | Thr | Gln | Asp | Ser | Thr | Asp | Ile | Cys | Lys | Phe |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 305 | | | | | 310 | | | | | 315 | | | | 320 | |
| Phe | Leu | Lys | Val | Ser | Glu | Leu | Phe | Asp | Lys | Thr | Arg | Lys | Ile | Glu | Ala |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Arg | Val | Ser | Ala | Asp | Glu | Asp | Leu | Lys | Leu | Ser | Asp | Leu | Leu | Lys | Tyr |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Tyr | Leu | Arg | Glu | Ser | Gln | Ala | Ala | Lys | Asp | Leu | Leu | Tyr | Arg | Arg | Ser |
| | | 355 | | | | 360 | | | | | | 365 | | | |
| Arg | Ser | Leu | Val | Asp | Tyr | Glu | Asn | Ala | Asn | Lys | Ala | Leu | Asp | Lys | Ala |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Arg | Ala | Lys | Asn | Lys | Asp | Val | Leu | Gln | Ala | Glu | Thr | Ser | Gln | Gln | Leu |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Cys | Cys | Gln | Lys | Phe | Glu | Lys | Ile | Ser | Glu | Ser | Ala | Lys | Gln | Glu | Leu |
| | | | 405 | | | | | 410 | | | | | 415 | | |
| Ile | Asp | Phe | Lys | Thr | Arg | Arg | Val | Ala | Ala | Phe | Arg | Lys | Asn | Leu | Val |
| | | | 420 | | | | 425 | | | | | | 430 | | |
| Glu | Leu | Ala | Glu | Leu | Glu | Leu | Lys | His | Ala | Lys | Gly | Asn | Leu | Gln | Leu |
| | | 435 | | | | 440 | | | | | | 445 | | | |
| Leu | Gln | Asn | Cys | Leu | Ala | Val | Leu | Asn | Gly | Asp | Thr | | | | |
| | 450 | | | | | 455 | | | | | 460 | | | | |

<210> 5843

<211> 6446

<212> DNA

<213> Homo sapiens

<400> 5843

```

ncgtacgccg ccaatgtcta cacctcagtg gtggaagagc tggcccgcgg ccagcagcgc
60
cggttcacgc ctgtggagca ggagtttttc cggctgtggt gggatggcgt cgcctcggac
120
cagcagaaat accaggtccg ccagctcctg gaggaaggac gcctggaatt tgtcatcgga
180
ggccaggtca tgcacgacga ggctgtgacg caccttgatg accagatcct gcagctcaca
240
gaaggacacg gggtttctcta tgaaacattt gggatccggc cacagttctc ctggcacggt
300
gacccgtttg gcgcctctgc cacgacgcc accctatttg cgctggcggg cttcaatgcc
360
cacctcggct cccggatcga ctacgacctg aaggcagcca tgcaggaggc ccggggggctg
420
cagttcgtgt ggcgagggtc cccatccctc tcagagcggc aggaaatctt cacgcacatc
480
atggaccagt acagctactg caccctgtcc cacatccctt tctccaacag gtcaggattt
540
tactggaatg gcgtggctgt cttccccaag cctccccag atgggggtgta cccaacatg
600
agtgagcctg tcaccccgag caacatcaac ctctatgccg aggcctgggt ggccaacgtg
660
aagcagaggg ccgcctgggt ccggacaccg cacgtcctct ggccctgggg atgtgacaag
720
cagttcttca atgcctcggg gcagtttgcc aacatggacc cgctgctgga ccacatcaac
780
agccatgctg ccgagctcgg tgtctcgggt cagtatgcca cgctgggcga ctacttcggt
840

```

gccctgcacg ctctcaatgt cacctggcgt gtccgcgacc accacgactt cctgccctat
900
tccacagaac cattccaggc ctggacgggc ttctacacgt cccgcagctc actgaagggg
960
ctggccccgc gagccagcgc cttgttgtat gccggggagt ccatgttcac acgctacctg
1020
tggccggccc cccgtgggca tctggacccc acctgggccc tgcagcagct ccagcagctt
1080
cgctggggcg tctccgaggt ccagcaccat gatgccatca ctgggactga gtcccccaag
1140
gtgagagaca tgtacgcaac gcacctggcc tcgggggatgc tgggcgtgcg caagctgatg
1200
gcctccatcg tcctagatga gctccagccc caggcaccga tggcggccag ctccgatgca
1260
ggacctgcag gacattttgc ctcggtctac aaccgcgtgg cctggacggg caccaccatc
1320
gtcacctga ctgttggttt cctggagtc cgcgtcacag atgaggcggg ccaccagtg
1380
ccctcgcaga tccagaactc aacagagacc ccattctcgt atgacctgct tattctgacc
1440
acaatcccag gcctcagtta ccggcactac agcatcagac ccactgcagg ggcccaagag
1500
ggcaccaggg agccggctgc cactgtggcg agcacccttc aatttgccg caggctgagg
1560
agacgcacca gccatgcggg cagggtacttg gtgcctgtgg caaacgactg ctacattgtg
1620
ctgctcgacc aggataccaa cctgatgcac agcatctggg agagacagag taaccgaacg
1680
gtgcgcgtga cccaggaatt cctggagtac cacgtcaaca gggatgtgaa acagggcccc
1740
atttccgata actacctgtt cacaccgggc aaggccgcgg tgctgcgtg ggaagctgtg
1800
gaaatggaga ttgtggcggg acagcttgtg actgagatcc ggcagtactt ctacaggaac
1860
atgacagcac agaattacac gtatgcaatc cgctcccggc tcacccatgt gccgcagggc
1920
catgacgggg agctgctctg ccaccgata gagcaggagt accaagccgg cccctggag
1980
ctgaaccgtg aggctgtcct gaggaccagc accaacctaa acagccagca ggtcatctac
2040
tcagacaaca acggctacca gatgcagcgg aggcctacg tttcctatgt gaacaacagc
2100
atgccccgga attactaccc catgggttcag tcggccttca tggaggatgg caaaagcagg
2160
cttgtgttgc tgtcggagcg ggcacatggc atctccagcc aagggaatgg gcagggtggg
2220
gtcatgctcc accggcggct gtggaacaac ttcgactggg acctgggcta caacctcacg
2280
ctgaacgaca cctcagtcgt ccaccagtg ctctggcttc tgctgggata ctggtccctc
2340
accactgccc tgcgccagag gagcgcactg gcgctgcagc acaggcccgt ggtgctgttc
2400
ggagacctcg ctgggactgc gccgaagctc ccaggacccc agcagcaaga ggccgtgacg
2460

ctgccccga atcttcacct gcagatcctg agcatccctg gctggcgcta cagctccaac
2520
cacacggagc actctcagaa tctccggaaa ggccatcgag gggaagccca ggctgacctc
2580
cgccgtgtcc tgctgcggt ctaccacctg tatgaagtgg gcgaggaccc agtcctgtct
2640
cagccagtaa cagtgaatct ggaggtgaac ttccccaccc ccatccagac cataagccag
2700
ggaagcaaac cctagatgaa gcccgaagaa actgccttgg caaagagatc cagaggggt
2760
tcctcccaa tggacgtgg tatgggcccc accccgccct tcttcattgt cttctgggt
2820
tgtcaggtat tacaactggc ctgggtttttt aggggtttttt gtgtatatgt gagacaggat
2880
ctcactctgt tgcccagtct ggggtgcagt ggcacaatct cagctcactg caacctctgc
2940
ctccctggct caagtgatcc tcccacctca acctcccaag taactgggat cacaggggag
3000
cgccaccacg atggctaagt tttttttttt ttttttttga gaccgagttt cgctctcgtc
3060
ccccaggctg gaggcaatg gtgcgtctc agctgggtgc aacctccatc tcccaggttc
3120
aagtgattct cctgcctcag cctcccgagt agctgggatt acaggcatgt gccaccacgc
3180
ccggctaatt tttttgtact tttagtagag acagggtttc tccatgttgg tcaggctgggt
3240
cacgaacccc tgacttcagg tgatccacct gcctcggcct cgcaaagtgc tgggattaca
3300
ggcgtgagcc accaagcctg gcctagtttt tttattttta gtagagacac ggtcttgctg
3360
tgttgctcag gctgggtctg aacgtctggc ctcaagcaat ctgcctgtct tagcctcctg
3420
aagtgtggg attacaggcg tgagtggcct gtattttctt tcttatttat tctgtggtaa
3480
aactttttaa acacagacaa catctgtgta atccaaaaac aaaacagatt ccccatagag
3540
ttgctttgaa aggtgactta gactcagaca atccagggtc cacaccagg cccctctacg
3600
ggggcatctc cggcaccca tgctctggg cctcagtttc ccccatgta aaatggggag
3660
aggtagagt tctttgcca gaaggttgc gagaggcct ggcactaagg ggcctcgtgc
3720
agtgtcagg cccccaggc tcgtccctt ccagggtccc ctcttggtg atgttgcct
3780
ctcagctcta ctatcaggcg aggtctccgc cacctggcct gccacgctc cctccccaga
3840
aggcatgacc tgagccgcct catttcttcc ccagtttgca ttctttctat ttcatttct
3900
gtcctaggag aattctgtg aatctctgtg tttctgcctt gggcctcctt cgacatctga
3960
gtcttcagg gaatccagag aagccccagt accttttcgc catgatgtct tactgggcca
4020
cccacctct ctttcatgat cctcgccagg gaggatcctt tctcagggt cctgggctg
4080

cctgagagca ggtctaggcc atggcgggta ccagtgccca gcacagggcc ggcctgccct
 4140
 gggaagcaag gaggccggcg tgggacctgg aagttaggtca tctgatgctc ccccgtttca
 4200
 cagatggaag caccaaggcc ctgagacaag gagacggttg ggatggacac catgactccc
 4260
 tgcccaacgt ggacgggtggg ggggtggaaa gaccattgag ttaggaacgc agtgagtttg
 4320
 gctgcaagtc acaaaacacc taacagatgt gcttagaaca gaggacagag tgttttctca
 4380
 ccgaacaggc atgtccgatg gacccaagc gctgtcaccg tgggcccgat cactgtcgtc
 4440
 ttcccgccat cgccggcaga ctggcttttg tcttttgccg tctgcttggt tgcggtcaca
 4500
 agatggcaca ggcctccctc atgagcaa atcaaggcag ggtggggctc ggcagtagtg
 4560
 gccagaaagg ccttgcccta gcggtggtct ctccctccgt cagcacacag aagcttctcc
 4620
 aagagccacc cccacccctc ctgtctcaca gacttttcca gaccctaag ggcctcctgc
 4680
 ctcccttagg tgtaaggag gctgggacaa ggcctatttg gaaaggggga tggggtaact
 4740
 gtggctggct tcctccctgg actgggacg gggccacctg agcaatgtgg ggagaggaga
 4800
 actccgcggt ggggtgggca gctcaaaatg ccacacctcc cgggctgctc ctccagctcg
 4860
 gccacctggg aaagcatgca cctcccgtt cagtgtcctc atctgtaaag tacacggcca
 4920
 gtcctgtcct cgcagatgtg ctgtgagaag cagatgaggg agctgtgtca ggcaccaggg
 4980
 gaggacctgg gtcctgagg acaccgagtt cgtggtgtgt ctgccctgct gctgtcttg
 5040
 ttctctgctc agctctggaa cttggtgcag ctactctcc ctctgctcct ctccctgcag
 5100
 gctgtgctgc aggcgctggg gtccgtgggt gcaaggagg agcgctcgt cacagggacc
 5160
 tgggatttga gcatgctgca ccgctggagc tggaggacgg ggcctggccg ccacagagg
 5220
 gacaccacct ctccctcgag gccaccagga ggcccatca tcaccatcca ccaaaggaa
 5280
 atccggacgt tctttattca ctttcaacag cagttagccc tgggcagatg ccccgctccc
 5340
 agggcttccc ccaggaactc catgtaacag aacagacca ggacaggga aagcagtgcg
 5400
 gagggatggg actggggagt cagctgctca tctgcaggct aatggcagga aatggtcata
 5460
 tttggggttt ttccctaatt tttttaaaca aaaattacat tacaagatcc aggttcttcc
 5520
 cccccacact caatcaagcc agccctctcc tcttctgtca cgtaaaggat atttggcaca
 5580
 ctcatgctc attcattcac aaaacacaaa ccaggactt tctgcctaag gcagagcaca
 5640
 agactcacag cagcaccgaa ggcacatctc cgtccggggc ctgccaggct tgccaggctg
 5700

ccagtggtaa ctgtggacct actgcgtgcc acgtgttttc atagactcat cccatgctgg
 5760
 caacagccct gcaaggggct tggctctgcc acagggcagg agaggaagtt gtagcgccta
 5820
 gcgagagttc cagccccaga cgcccacctg tgcctcaggg caccgcctgc cgagcagaga
 5880
 aggcacagca gccgtcagag tccatgagag gtgaaaccac acagcagga tgtccaatat
 5940
 cagaactatt aatatcaata aaagtataac cttcccaggt ctatgcccga gagaattgaa
 6000
 aacatccatc cacacaatac ctgtgctccc gcgttcatag cagcattact caaaagtcaa
 6060
 acggtagcaa caacccaaat gtccatccac agatgaatta agacatgaag tgtgttctgt
 6120
 ccatacaatg gaatattatt tggccataaa aaggaaggaa attctgacgc atgccacagc
 6180
 ctgagtgaat cctacaaata ttacgctaag tgaaagaagc caatcacgag tttatgtgaa
 6240
 atgtccagaa taggcaaata tgtgtatcag agacaaagca cattggtggt tgccaggta
 6300
 tggaggaaga gagaagaggc atgacagcta acagggacgg gctttctttg gaagatgatg
 6360
 aaattgtgga atgatggttg cacaactttg tgaatatact agaaaccaat gaattaaaaa
 6420
 ctttggaaga tgaaaaaaaa aaaaaa
 6446

<210> 5844
 <211> 823
 <212> PRT
 <213> Homo sapiens

<400> 5844
 Gly His Gly Phe Leu Tyr Glu Thr Phe Gly Ile Arg Pro Gln Phe Ser
 1 5 10 15
 Trp His Val Asp Pro Phe Gly Ala Ser Ala Thr Thr Pro Thr Leu Phe
 20 25 30
 Ala Leu Ala Gly Phe Asn Ala His Leu Gly Ser Arg Ile Asp Tyr Asp
 35 40 45
 Leu Lys Ala Ala Met Gln Glu Ala Arg Gly Leu Gln Phe Val Trp Arg
 50 55 60
 Gly Ser Pro Ser Leu Ser Glu Arg Gln Glu Ile Phe Thr His Ile Met
 65 70 75 80
 Asp Gln Tyr Ser Tyr Cys Thr Pro Ser His Ile Pro Phe Ser Asn Arg
 85 90 95
 Ser Gly Phe Tyr Trp Asn Gly Val Ala Val Phe Pro Lys Pro Pro Pro
 100 105 110
 Asp Gly Val Tyr Pro Asn Met Ser Glu Pro Val Thr Pro Ala Asn Ile
 115 120 125
 Asn Leu Tyr Ala Glu Ala Leu Val Ala Asn Val Lys Gln Arg Ala Ala
 130 135 140
 Trp Phe Arg Thr Pro His Val Leu Trp Pro Trp Gly Cys Asp Lys Gln
 145 150 155 160
 Phe Phe Asn Ala Ser Val Gln Phe Ala Asn Met Asp Pro Leu Leu Asp

5015

595 600 605
 Arg Arg Pro Tyr Val Ser Tyr Val Asn Asn Ser Ile Ala Arg Asn Tyr
 610 615 620
 Tyr Pro Met Val Gln Ser Ala Phe Met Glu Asp Gly Lys Ser Arg Leu
 625 630 635 640
 Val Leu Leu Ser Glu Arg Ala His Gly Ile Ser Ser Gln Gly Asn Gly
 645 650 655
 Gln Val Glu Val Met Leu His Arg Arg Leu Trp Asn Asn Phe Asp Trp
 660 665 670
 Asp Leu Gly Tyr Asn Leu Thr Leu Asn Asp Thr Ser Val Val His Pro
 675 680 685
 Val Leu Trp Leu Leu Leu Gly Ser Trp Ser Leu Thr Thr Ala Leu Arg
 690 695 700
 Gln Arg Ser Ala Leu Ala Leu Gln His Arg Pro Val Val Leu Phe Gly
 705 710 715 720
 Asp Leu Ala Gly Thr Ala Pro Lys Leu Pro Gly Pro Gln Gln Gln Glu
 725 730 735
 Ala Val Thr Leu Pro Pro Asn Leu His Leu Gln Ile Leu Ser Ile Pro
 740 745 750
 Gly Trp Arg Tyr Ser Ser Asn His Thr Glu His Ser Gln Asn Leu Arg
 755 760 765
 Lys Gly His Arg Gly Glu Ala Gln Ala Asp Leu Arg Arg Val Leu Leu
 770 775 780
 Arg Leu Tyr His Leu Tyr Glu Val Gly Glu Asp Pro Val Leu Ser Gln
 785 790 795 800
 Pro Val Thr Val Asn Leu Glu Val Asn Phe Pro Thr Pro Ile Gln Thr
 805 810 815
 Ile Ser Gln Gly Ser Lys Pro
 820

<210> 5845

<211> 2762

<212> DNA

<213> Homo sapiens

<400> 5845

aaatttgtat ccagggtccgt tccagctttc tttcacagtgc cctgttcctg ggggcagcac
 60
 gtgctgagca agggtaaggc tgccggaagc agcgtgtggg gtgcttggaa gatggacagc
 120
 acatccctgc tgggtggcagc agccttcctg agggaggtgt cctcctgtga ttatagggcc
 180
 ttgtcaggtg gagatggaat tgggtggccg ggcacattgg ctacaccta taatcccagc
 240
 atttttggag accgaggtga gcggatcact tgagctcagg agtttgaaac caacctggga
 300
 aacatagggg gaccccatct ctccctcctc atctccccac agcccgatct gctcaacttc
 360ggatgtcgat cttggacgag cctggagagc ctccctcccc ctgcgtcacc 420
 accaccta cttcgcagtg gaagaaacat tggtttgtgc tgacagattc aagtctcaaa
 480
 tattacagag actccactgc tgaggaggca gatgagctgg atggtgagat cgacctgcgt
 540
 tcctgcacgg atgtcactga gtacgcggtg cagcgcaact atggcttcca gatccacacc
 600

aaggatgctg tctatacctt gtcggccatg acctcaggca tccggcggaa ctggatcgag
660
gctctgagaa agaccgtacg tccaacttca gccccagatg tcaccaagct ctcggaactct
720
aacaaggaga acgcgctgca cagctacagc acccagaagg gccccctgaa ggcaggggag
780
cagcgggcgg gctctgaggt catcagccgg ggtggccctc ggaaggcgga cgggcagcgt
840
caggccttgg actacgtgga gctctcgccg ctgaccagg cttccccgca gcgggcccgc
900
acccagccc gactcctga ccgcctggcc aagcaggagg agctggagcg ggacctggcc
960
cagcgtccg aggagcggcg caagtggttt gaggccacag acagcaggac cccagagggtg
1020
cctgctggtg aggggcccgc ccggggcctg ggtgcccccc tgactgagga ccagcaaac
1080
cggcttagtg aggagatcga gaagaagtgg caggagctgg agaagctgcc cctgcgggag
1140
aataagcggg tgccctcac tgccctgctc aaccaaagcc gcggagagcg ccgagggccc
1200
ccaagtgcg gccacgaggc actggagaag gaggaggcat gtgagcgag cctggcagag
1260
atggagtcct cgcaccagca ggtgatggag gagctgcagc ggcaccacga gcgggagctg
1320
cagcgcctgc agcaggagaa ggagtggctc ctggctgagg agacggcagc cacggcctca
1380
gccattgaag ccatgaagaa ggcctatcag gaagagctga gccgagagct gagcaaaaca
1440
cggagtctcc agcagggccc ggatggcctc cggaagcagc accagtcaga tgtggaggca
1500
ctgaagcgag agctgcaggt gctatcggag cagtactcgc agaagtgcct ggagattggg
1560
gactcatgc ggcaggctga ggagcgcgag cacacgctgc gccgctgcca gcaggagggc
1620
caggagctgc tgcgccaaa ccaggagctg catggccgcc tgtcagagga gatagaccag
1680
ctgcgcggtc tcattgcctc gcagggcatg ggcaatggct gcgggcgag caacgagcgg
1740
agttcctcgc agctagaggt gctgcttcgc gtaaaagaaa acgaactcca gtacctaaag
1800
aaggaggtgc agtgccctcg ggacgagctc cagatgatgc agaaggacaa gcgcttcacc
1860
tcgggaaagt accaggacgt ctatgtggag ctgagccaca tcaagacacg gtctgagcgg
1920
gagatcgagc agctgaagga gcacctgcgt cttgccatgg ccgccctcca ggagaaggag
1980
tcgatgcgca acagcctggc tgagtagagg tcccgcccag ctgcagaccc tccaggctgg
2040
aggaccagcc gccctccttc cctcctggat ggaagtaaaa agccaagctt tctccccacc
2100
ctctgtgggc cacacgtgca cttgcaccca ccacacacac acacacacac acacacacac
2160
acagacacac agacacatac gcacacacgt gcacacatgt acacacggat acacacacac
2220

acacacacac acacacactg catatctgag cacgcccctc gcactgggtc tcaccttgca
 2280
 ccttcttcag gattttatat gtgaagagat ttttatatag atttttttcc tttttttcca
 2340
 aaacacttta tacttttaaaa aaaaaaaaaa aaaagcaatt cctgggtggct gtgtgcctcc
 2400
 aaccctggtc cccctctgtc tccagccacc ctctgcttgg gcttctgagc tggtgccctc
 2460
 ggccagagg tctggcggag gccagggcag cagccatggc ggggtgtctc tacaggggag
 2520
 aggggggagc ctgccaccct cttcctgccc tacctcctac taacacttcc tgccccattt
 2580
 ggacccttac catggggctc aggacagagg gagctagcag ctggcctcca tggccccaca
 2640
 gcctccttcg aggtctgtgt ggggtgcagaa ccgccagagc caccctaaaag gtgtttctct
 2700
 tctgctccct gaacctctta acttaataaa acgttccagc agcaaaaaaaaa aaaaaaaaaa
 2760
 ag
 2762

<210> 5846

<211> 257

<212> PRT

<213> Homo sapiens

<400> 5846

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Cys | Glu | Arg | Ser | Leu | Ala | Glu | Met | Glu | Ser | Ser | His | Gln | Gln |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Val | Met | Glu | Glu | Leu | Gln | Arg | His | His | Glu | Arg | Glu | Leu | Gln | Arg | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Gln | Glu | Lys | Glu | Trp | Leu | Leu | Ala | Glu | Glu | Thr | Ala | Ala | Thr | Ala |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Ser | Ala | Ile | Glu | Ala | Met | Lys | Lys | Ala | Tyr | Gln | Glu | Glu | Leu | Ser | Arg |
| | | | 50 | | | | 55 | | | | 60 | | | | |
| Glu | Leu | Ser | Lys | Thr | Arg | Ser | Leu | Gln | Gln | Gly | Pro | Asp | Gly | Leu | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Lys | Gln | His | Gln | Ser | Asp | Val | Glu | Ala | Leu | Lys | Arg | Glu | Leu | Gln | Val |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Leu | Ser | Glu | Gln | Tyr | Ser | Gln | Lys | Cys | Leu | Glu | Ile | Gly | Ala | Leu | Met |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Gln | Ala | Glu | Glu | Arg | Glu | His | Thr | Leu | Arg | Arg | Cys | Gln | Gln | Glu |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Gly | Gln | Glu | Leu | Leu | Arg | His | Asn | Gln | Glu | Leu | His | Gly | Arg | Leu | Ser |
| | | | 130 | | | | 135 | | | | | 140 | | | |
| Glu | Glu | Ile | Asp | Gln | Leu | Arg | Gly | Phe | Ile | Ala | Ser | Gln | Gly | Met | Gly |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Asn | Gly | Cys | Gly | Arg | Ser | Asn | Glu | Arg | Ser | Ser | Cys | Glu | Leu | Glu | Val |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Leu | Leu | Arg | Val | Lys | Glu | Asn | Glu | Leu | Gln | Tyr | Leu | Lys | Lys | Glu | Val |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Gln | Cys | Leu | Arg | Asp | Glu | Leu | Gln | Met | Met | Gln | Lys | Asp | Lys | Arg | Phe |
| | | | 195 | | | | 200 | | | | | 205 | | | |
| Thr | Ser | Gly | Lys | Tyr | Gln | Asp | Val | Tyr | Val | Glu | Leu | Ser | His | Ile | Lys |

| | | |
|---|-----|-----|
| 210 | 215 | 220 |
| Thr Arg Ser Glu Arg Glu Ile Glu Gln Leu Lys Glu His Leu Arg Leu | | |
| 225 | 230 | 235 |
| Ala Met Ala Ala Leu Gln Glu Lys Glu Ser Met Arg Asn Ser Leu Ala | | 240 |
| | 245 | 250 |
| | | 255 |
| Glu | | |

<210> 5847

<211> 1021

<212> DNA

<213> Homo sapiens

<400> 5847

```

ggcacgagct cgtgcggccg ggtgagagcg tgcggccgga ttcaccacaa catggcaaat
60
ctttttataa ggaaaatggt gaaccctctg ctctatctca gtcgtcacac ggtgaagcct
120
cgagccctct ccacatttct atttgatcc attcgaggtg cagccccctg ggctgtggaa
180
cccggggcag cagtgcgctc acttctctca cccggcctcc tgccccatct gctgcctgcg
240
ctgggggttca aaaacaagac tgtccttaag aagcgctgca aggactgtta cctgggtgaag
300
aggcggggtc ggtggtacgt ctactgtaaa acccatccga ggcacaagca gagacagatg
360
tagacccttt ccctccagag tcacgcacat actcgtcatc gcataccttg ggagaatggt
420
tgtatcttat ggaaggaatt atcacatcaa ggagtcaggg gaaagtgact ggaagcaaac
480
gccctaaaag ttacccatca cgtttcagtg taaatgagta actatagaag acattgcgtt
540
atcttatttc caaaacgttc caactaaaaa acattttcct attaaaatag accttccgaa
600
tagcttagtt cattcattct ctctgaactc aggctgcagg tagggattgg atggtgctgg
660
gtgaggctgg gcaggacttc tctatgtctc cgtgaggctg cttagagcct cttggaagaa
720
gtggtgtttt ggtcaccctg cgctgtacaa gccaaggctt ggtggcttaa atcagccatt
780
ttacattggt cacgattttg tgaggcattt gggatgggct cagctgagca gtttgtctga
840
tctgtgtggc attaactgca ggaccactt ccaagatggc accggctctc ctgtctgggg
900
tctcagtgtc cctcaggctg tacgtagcac ctctcaggc agggcccaca gcgtgctttg
960
cactgcccc aagttagctt cccgagagtg ttccgagaga cccaagcaga tgctacgagg
1020
c

```

1021

<210> 5848

<211> 120

<212> PRT

<213> Homo sapiens

<400> 5848

```

Gly Thr Ser Ser Cys Gly Arg Val Arg Ala Cys Gly Arg Ile His His
 1           5           10           15
Asn Met Ala Asn Leu Phe Ile Arg Lys Met Val Asn Pro Leu Leu Tyr
      20           25           30
Leu Ser Arg His Thr Val Lys Pro Arg Ala Leu Ser Thr Phe Leu Phe
      35           40           45
Gly Ser Ile Arg Gly Ala Ala Pro Val Ala Val Glu Pro Gly Ala Ala
      50           55           60
Val Arg Ser Leu Leu Ser Pro Gly Leu Leu Pro His Leu Leu Pro Ala
      65           70           75           80
Leu Gly Phe Lys Asn Lys Thr Val Leu Lys Lys Arg Cys Lys Asp Cys
      85           90           95
Tyr Leu Val Lys Arg Arg Gly Arg Trp Tyr Val Tyr Cys Lys Thr His
      100          105          110
Pro Arg His Lys Gln Arg Gln Met
      115          120

```

<210> 5849

<211> 3174

<212> DNA

<213> Homo sapiens

<400> 5849

```

nttttttttt ttaccaacgg gagatgcagt ttatttacac cagcagccat gggggcagag
60
ggaatacaca gcgtttacaa agttagctac ctgtacagaa tggattacat atgcaaaaat
120
aaaaatctca agaccacagg acagcgtgag cccaccccc ctcccccaat gacccagca
180
tgcggtaatg ccaggcgggt ggcccctggg catgcggggg ggagtgatgc atggaaggaa
240
aagccaccgg ccatggaaat tagtacagaa cccccccaca cacactcaga cacaggatac
300
agggtggacg acacctagcc ggggtgggaa ggatgggaat tgaaaccac acagcctgct
360
gttagaggga ggggagtggg gagctcctag cccctgttca actacatggt aggggggggc
420
actctctccc cagaaggaaa agggtttgtt ccctcagggt ccctgctgga ccaagcccat
480
ctcttaccba gcctgggcag ggggctctgc cctgagggcg ggccaaggaa caatggggaa
540
gtttatgtgg acaaaccagt tccaagcta cttcccactt ctccctcctc caaccagaag
600
gggggaaaag ggagaggcca cagggcaaag agtgtattag ggcctgagct gcagctgcct
660
ctcagaaggg agagtggccc acagccttcc tcccttcacc ttcagccac tccccagact
720
gcatctggaa gcggttagag gcctgctgag atcctcctct ccctctggcc tcctctcgga
780
gggagactac ggagggccaa gaatagagaa gccagggccc cgggatttat tctaactcct
840

```

gccaaaawyy mmttggtttt ttaaaaaata atcacaattt gtgggttaaa aaccaatttg
900
caaccaggca tgagccacaa tcagaaccac cccagcggga gagcggagtt ccagacaggg
960
nattgcagcc ccattctgtg tgttccctta accctctagg gtccctaacc cgatcagtc
1020
aaccagtcct ggggtactaac taccctaatg tgggatggct cctcttgga agagggtagg
1080
ggacatgtcc agcaagtgcc agagaacttg gctcagggtc aactccaccc cgtgtcagtc
1140
agctctgctc ccagcccags msgsggtcct ccagsttgyy tcttgggagt ngnggtgccc
1200
gcatmgaggg gggacggtac atctcttttag gatgtagacc aggcaggtgg gcacactggc
1260
atgacagtcc cacagagggg cagtgcaccc ccttcccctc cactgacaac ctggggcaca
1320
gaggccaccc tctcttccca cccaactcct agcaaagggg gagaggcaca agattaggat
1380
tttctcaga gccccaaacc acaagtacag aataaataac ttaaaagcgc taaggaaggg
1440
aaacagggca cgctttggag gcaggagcgc tgagaggaac tgaagccagt caaggtgaag
1500
ggggtggaag cagcagttgg gaacctgggc tgccccggta gggcagtggg gcagggtggg
1560
caggaggaac acggggccac cccaggaggg tgaggctggg tcccttcctg gggcagggaa
1620
tgaggtaga aaacatttca aataaagcag caccgttccc tctcaccttg gggccccact
1680
cctcaccagc cctgggtcag ggaggagagg cagggggagg aattctgaca cttctccctc
1740
ttcctaccct ccctttccca ttccttgaag ctgtagaggc tggaggccct ttcctggcac
1800
ccaacaaaag gacagctcct gctgccaaag aggcccatgg ggactgaggg gaaagggctg
1860
cccctgtgag gggcagggaa ggtggcggca gttctggacg cccacctcag cagacagcac
1920
tctgtgctg cctaccctg ggactggggg catttgataa gattctgcac acagacagga
1980
catgcccagc cttgcccctc agctccaagc accggacca ttcacattgc tgagggcggc
2040
cgaggcagc cccctccagg ctacagcttc aaccacagc ctcccgggtc gccacattgc
2100
ccctcagcag ggcttagtcc agttcctggg gtggggggca ggcagtgcc tggcacagtg
2160
cccagggtea ggcgccctgg cctagctgga catccagtaa ctcacagaat aaataggaaa
2220
accgcctccc caccctactt atgtccaagg cataatatgt ccaggtctga gtctgcacg
2280
ccgaggagtc gtgtccatt gcagaggact ttgacacccc ccaggggcgc ataatcggat
2340
cctctgctg cctggcccac caagcttccc aagccccaac cccagcagc cgtccatttg
2400
ccaggtatg ccacctgggt gggggtcagg agagagggct ctgctcagcc aaaggctatc
2460

ccttgacccc aagtcagttg atgtcatcat agatgctggg cgtcgggggt gccggtggct
 2520
 ttggcttctt cttcttggtg gaacctaggc cggaggcagt ccctaccagg ctcatatggg
 2580
 atttcttttt cttgggttttc cgtgactcag agctggttgg acctagaccc catccctgat
 2640
 tttcactcgt cttggaggag cctgaatcag aggggtgagag gtcagaggag ccgtcccact
 2700
 gaagccggct gatcagggcc tggctgtcag tcatgtcaaa gctgtcatta tccagggagc
 2760
 tctcgacctc tggaaggaca gccgagggcc cgagaaaata aatccgtacg gttcgctctt
 2820
 gctcatctgt gtgctgtggg cagcgcaggg accttgtgca catcttcttg gtgtgttcag
 2880
 aaatcacccc acattgcgtg gttagcaggc tgcaagctc ctccggcccc aggggtctcat
 2940
 agctgatccc agttgaattg ttatacttaa aaggatccga attgctaagt tccccatttt
 3000
 tgtgttttaa tgacttggat cttcgagggg aattgggggt ctggaatggg agataccata
 3060
 gctttgggga aagggtaacg aaaaggggga gccgagaacc cagggaagga aaaaagattt
 3120
 gacaaagcag catcctcaaa ttcctactct tctccccag taggaggcct gtct
 3174

<210> 5850

<211> 154

<212> PRT

<213> Homo sapiens

<400> 5850

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Gly | Lys | Val | Ala | Ala | Val | Leu | Asp | Ala | His | Leu | Ser | Arg | Gln |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| His | Ser | Val | Pro | Ala | Tyr | Pro | Trp | Asp | Trp | Gly | His | Leu | Ile | Arg | Phe |
| | | | 20 | | | | | 25 | | | | | | 30 | |
| Cys | Thr | Gln | Thr | Gly | His | Ala | Gln | Pro | Cys | Pro | Ser | Ala | Pro | Ser | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Pro | Ile | His | Ile | Ala | Glu | Gly | Gly | Arg | Gly | Arg | Pro | Pro | Pro | Gly |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Ser | Ala | Ser | Asn | Pro | Gln | Pro | Pro | Gly | Ser | Pro | His | Cys | Pro | Ser | Ala |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Gly | Leu | Ser | Pro | Val | Pro | Gly | Val | Gly | Gly | Arg | Gln | Cys | Pro | Gly | Thr |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Val | Pro | Arg | Val | Arg | Arg | Pro | Gly | Leu | Ala | Gly | His | Pro | Val | Thr | His |
| | | | 100 | | | | | 105 | | | | | | 110 | |
| Arg | Ile | Asn | Arg | Lys | Thr | Ala | Ser | Pro | Pro | Asn | Leu | Cys | Pro | Arg | His |
| | | 115 | | | | 120 | | | | | | 125 | | | |
| Asn | Met | Ser | Arg | Ser | Glu | Ser | Cys | Thr | Pro | Arg | Ser | Arg | Ala | Pro | Leu |
| | 130 | | | | | 135 | | | | | | 140 | | | |
| Gln | Arg | Thr | Leu | Thr | Pro | Pro | Arg | Gly | Ala | | | | | | |
| 145 | | | | | | 150 | | | | | | | | | |

<210> 5851

<211> 488

<212> DNA

<213> Homo sapiens

<400> 5851

```

tttttttttt tatgaaaaaa gcagcaactc tttagtgatc atggaattaa tctgacagca
60
attaaatgtg tttaagcatc tggcatatct cctcaattgc accaaaagaa tttggaagca
120
cttggttttg tctcaaaggc aaaaggaaaag gacgaggaag gggccaggcc tcccgccagg
180
ccccgcccc cctcacattt ctgagtccgc atacatcccc ttgattaagt agtccacctg
240
ggtagtagtcc ttcttcttgt agctctcata ggcattctgtc ctgcttgtgt cctctgttgt
300
gacttcata gagttgaggt gggctgccga agtccctttg gtcaatgtga caggagaagc
360
tgctgcatg gttacatcct cagacgtttt attatcaact gtttccacag atgcattcct
420
cttgactaat cccttcaca ttttgtagg gacaaagttg cctgggaggg ctgcggttcc
480
tgacgcgt
488

```

<210> 5852

<211> 82

<212> PRT

<213> Homo sapiens

<400> 5852

```

Met Trp Lys Gly Leu Val Lys Arg Asn Ala Ser Val Glu Thr Val Asp
 1             5             10            15
Asn Lys Thr Ser Glu Asp Val Thr Met Ala Ala Ala Ser Pro Val Thr
          20             25             30
Leu Thr Lys Gly Thr Ser Ala Ala His Leu Asn Ser Met Glu Val Thr
          35             40             45
Thr Glu Asp Thr Ser Arg Thr Asp Ala Tyr Glu Ser Tyr Lys Lys Lys
          50             55             60
Asp Tyr Thr Gln Val Asp Tyr Leu Ile Asn Gly Met Tyr Ala Asp Ser
65             70             75             80
Glu Met

```

<210> 5853

<211> 487

<212> DNA

<213> Homo sapiens

<400> 5853

```

nacgcgtgaa gggaatggaa ggtgcagaga ccagagctga gggaggcttc aggggattac
60
agacggtctc aagagggagg cccagcccg cccgcggccc ctgacacccc atcaggccgc
120
tcaggccag cagctccatg gaggacgcc gcgaggaccc caccacgttt gctgcccact
180

```


ctctgcccag tgacccccgt ctcttgcca ctgtgaccaa cgcatacctg ggcacacgag
 240
 tgtttcacga cacgctgcac gtgagcgggc tgtacaatgg ggctggcggg gacacgcacc
 300
 gggccatgct gccagcccc ctcaacgtcc ggctggaggc ccccgaggg atgggggagc
 360
 agctgaccga gaccttcgcc ctggacacca acacaggctc ctttcttcac accctggagg
 420
 gcccccgctt ccgggcctcc cagtgcatt atggcatcg cacgctgcc cacgtgctgg
 480
 ctttccg
 487

<210> 5854

<211> 68

<212> PRT

<213> Homo sapiens

<400> 5854

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Glu | Trp | Lys | Val | Gln | Arg | Pro | Glu | Leu | Arg | Glu | Ala | Ser | Gly | Asp |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Tyr | Arg | Arg | Ser | Gln | Glu | Gly | Gly | Pro | Ala | Arg | Pro | Ala | Ala | Pro | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Pro | Ser | Gly | Arg | Ser | Gly | Pro | Ala | Ala | Pro | Trp | Arg | Thr | Pro | Ala |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Arg | Thr | Pro | Pro | Arg | Leu | Leu | Pro | Thr | Leu | Cys | Pro | Val | Thr | Pro | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ser | Trp | Pro | Leu | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | | | | |

<210> 5855

<211> 362

<212> DNA

<213> Homo sapiens

<400> 5855

gcgcgccagg ggcaggggag ggatggagcc agcgagggtc gggatagcga gcgagggtgg
 60
 gagggactcc gtaacagccc ctctgtgctc agcggatccc cttctagcag tccctccctc
 120
 tcctcccgac cctcccgag gcacctgctg ggggctgtgg ggcccaaagc gggagggagt
 180
 taacgaggtt gttgcagaag tcctcctggc ggcacacgaa ggtgtaggag atcagggaga
 240
 ggccggggcc catccggtgc tcagtgacgc ggggctcctg gtccttggcc tccgtgcagc
 300
 ccttgagag caccaggctc acttgggggc cgctctcaat gagcatcaac gtgtcctggc
 360
 an
 362

<210> 5856

<211> 113

<212> PRT

<213> Homo sapiens

<400> 5856

```

Met Glu Pro Ala Arg Val Gly Ile Ala Ser Glu Gly Gly Arg Asp Ser
 1           5           10           15
Val Thr Ala Pro Leu Cys Ser Ala Asp Pro Leu Leu Ala Val Pro Pro
          20           25           30
Ser Pro Pro Asp Pro Pro Ala Gly Thr Cys Trp Gly Leu Trp Gly Pro
          35           40           45
Lys Arg Glu Gly Val Asn Glu Val Val Ala Glu Val Leu Leu Ala Ala
          50           55           60
His Glu Gly Val Gly Asp Gln Gly Glu Ala Gly Ala His Pro Val Leu
65           70           75           80
Ser Asp Ala Gly Leu Leu Val Leu Gly Leu Arg Ala Ala Leu Gly Glu
          85           90           95
His Gln Ala His Leu Gly Ser Ala Leu Asn Glu His Gln Arg Val Leu
          100           105           110
Ala

```

<210> 5857

<211> 1751

<212> DNA

<213> Homo sapiens

<400> 5857

```

gggcggcgcc gagctgaggt ggtgagggac tagctcccgg atgtggagaa gctggggaga
60
aggcgtggga ggaagatgga ctcggtggag aagggggccg ccacctccgt ctccaacccg
120
cgggggcgac cgtcccgggg ccggccgccg aagctgcagc gcaactctcg cggcggccag
180
ggccgaggtg gggagaagcc cccgcacctg gcagccctaa ttctggcccc gggaggcagc
240
aaaggcattc ccctgaagaa cattaagcac ctggcggggg tcccgctcat tggctgggtc
300
ctgcgtgcgg ccctggattc aggggccttc cagagtgtat gggtttcgac agaccatgat
360
gaaattgaga atgtggccaa acaatttggt gcacaagttc atcgaagaag ttctgaagtt
420
tcaaaagaca gctctacctc actagatgcc atcatagaat ttcttaatta tcataatgag
480
gttgacattg taggaaatat tcaagctact tctccatggt tacatcctac tgatcttcaa
540
aaagttgcag aaatgattcg agaagaagga tatgattctg ttttctctgt tgtgagacgc
600
catcagtttc gatggagtga aattcagaaa ggagttcgtg aagtgaccga acctctgaat
660
ttaaatccag ctaaaccggc tcgtcgacaa gactgggatg gagaattata tgaaaatggc
720
tcattttatt ttgctaaaag acatttgata gagatggggt acttgcaggg tggaaaaatg
780
gcatactacg aaatgcgagc tgaacatagt gtggatatag atgtggatat tgattggcct
840

```

attgcagagc aaagagtatt aagatatggc tatTTTTggca aagagaagct taaggaaata
 900
 aaactTTTTgg tttgcaatat tgatggatgt ctcaccaatg gccacattta tgtatcagga
 960
 gaccaaaaaag aaataaatatc ttatgatgta aaagatgcta ttgggataag tttattaaag
 1020
 aaaagtggta ttgaggtgag gctaattctca gaaagggcct gttcaaagca gacgctgtct
 1080
 tctttaaaac tggattgcaa aatggaagtc agtgtatcag acaagctagc agttgtagat
 1140
 gaatggagaa aagaaatggg cctgtgctgg aaagaagtgg catatcttgg aaatgaagtg
 1200
 tctgatgaag agtgcttgaa gagagtgggc ctaagtggcg ctctgctga tgcctgttct
 1260
 actgcccaga aggctgttgg atacatttgc aaatgtaatg gtggccgtgg tgccatccga
 1320
 gaatttgcag agcacatttg cctactaatg gaaaagggtta ataattcatg ccaaaaatag
 1380
 aaattagcgt aatattgaga aaaaaatgat acagccttct tcagccagtt tgcttttatt
 1440
 tttgattaag taaattccat gttgtaatgt tacagagagt gtgatttggg ttgtgatata
 1500
 tatatattgt gctctacttt tctctttacg caagataatt atttagagac tgattacagt
 1560
 ctttctcaga tttttagtaa atgcaagtaa gaacatcatc aaagtccact ttgtattgta
 1620
 ccctgtaaaa ctgtgtgttt gtgtgctttc aaagatgttg ggattttatt tatctgggga
 1680
 cagtgtgtat ggtaagacat gcccttctat taataaaaact acatttctca aaaaaaaaaa
 1740
 aaaaaaaaaa a
 1751

<210> 5858

<211> 434

<212> PRT

<213> Homo sapiens

<400> 5858

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Ser | Val | Glu | Lys | Gly | Ala | Ala | Thr | Ser | Val | Ser | Asn | Pro | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Arg | Pro | Ser | Arg | Gly | Arg | Pro | Pro | Lys | Leu | Gln | Arg | Asn | Ser | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Gly | Gln | Gly | Arg | Gly | Gly | Glu | Lys | Pro | Pro | His | Leu | Ala | Ala | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ile | Leu | Ala | Arg | Gly | Gly | Ser | Lys | Gly | Ile | Pro | Leu | Lys | Asn | Ile | Lys |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| His | Leu | Ala | Gly | Val | Pro | Leu | Ile | Gly | Trp | Val | Leu | Arg | Ala | Ala | Leu |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Asp | Ser | Gly | Ala | Phe | Gln | Ser | Val | Trp | Val | Ser | Thr | Asp | His | Asp | Glu |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Ile | Glu | Asn | Val | Ala | Lys | Gln | Phe | Gly | Ala | Gln | Val | His | Arg | Arg | Ser |
| | | 100 | | | | | | 105 | | | | 110 | | | |
| Ser | Glu | Val | Ser | Lys | Asp | Ser | Ser | Thr | Ser | Leu | Asp | Ala | Ile | Ile | Glu |

115 120 125
 Phe Leu Asn Tyr His Asn Glu Val Asp Ile Val Gly Asn Ile Gln Ala
 130 135 140
 Thr Ser Pro Cys Leu His Pro Thr Asp Leu Gln Lys Val Ala Glu Met
 145 150 155 160
 Ile Arg Glu Glu Gly Tyr Asp Ser Val Phe Ser Val Val Arg Arg His
 165 170 175
 Gln Phe Arg Trp Ser Glu Ile Gln Lys Gly Val Arg Glu Val Thr Glu
 180 185 190
 Pro Leu Asn Leu Asn Pro Ala Lys Arg Pro Arg Arg Gln Asp Trp Asp
 195 200 205
 Gly Glu Leu Tyr Glu Asn Gly Ser Phe Tyr Phe Ala Lys Arg His Leu
 210 215 220
 Ile Glu Met Gly Tyr Leu Gln Gly Gly Lys Met Ala Tyr Tyr Glu Met
 225 230 235 240
 Arg Ala Glu His Ser Val Asp Ile Asp Val Asp Ile Asp Trp Pro Ile
 245 250 255
 Ala Glu Gln Arg Val Leu Arg Tyr Gly Tyr Phe Gly Lys Glu Lys Leu
 260 265 270
 Lys Glu Ile Lys Leu Leu Val Cys Asn Ile Asp Gly Cys Leu Thr Asn
 275 280 285
 Gly His Ile Tyr Val Ser Gly Asp Gln Lys Glu Ile Ile Ser Tyr Asp
 290 295 300
 Val Lys Asp Ala Ile Gly Ile Ser Leu Leu Lys Lys Ser Gly Ile Glu
 305 310 315 320
 Val Arg Leu Ile Ser Glu Arg Ala Cys Ser Lys Gln Thr Leu Ser Ser
 325 330 335
 Leu Lys Leu Asp Cys Lys Met Glu Val Ser Val Ser Asp Lys Leu Ala
 340 345 350
 Val Val Asp Glu Trp Arg Lys Glu Met Gly Leu Cys Trp Lys Glu Val
 355 360 365
 Ala Tyr Leu Gly Asn Glu Val Ser Asp Glu Glu Cys Leu Lys Arg Val
 370 375 380
 Gly Leu Ser Gly Ala Pro Ala Asp Ala Cys Ser Thr Ala Gln Lys Ala
 385 390 395 400
 Val Gly Tyr Ile Cys Lys Cys Asn Gly Gly Arg Gly Ala Ile Arg Glu
 405 410 415
 Phe Ala Glu His Ile Cys Leu Leu Met Glu Lys Val Asn Asn Ser Cys
 420 425 430
 Gln Lys

<210> 5859

<211> 2267

<212> DNA

<213> Homo sapiens

<400> 5859

tttttttttt ttttttgaca gtagacaatg ttgttgttta tttaaaatgt ttactccaag
 60
 aaatatatat ataaaaaaaa taataagaca attacagcac taaaccaggc accttcgacc
 120
 aaatcacacac ctctcttttg attcccttcc acgctaagcc tcttttcaaat tcttttttct
 180

gagctggaag accagtcaga tgcccgagg gtcagcgcca agcacattcc caaccgggca
240
actgtgtacc tttctctagg agtgcacgac acccttcccc cacaactcct tgttttaaag
300
gatttaaccc attaggaagc ccatgtttca atctaagcca gaaggagctg cgggacaagg
360
cagtcttcac tttgaaggtc cttttcctgc tccagtcctt gggctagggt tctagaagag
420
gctggctgcc acgtttacat gaggccaccg aagatctaag tccagctaag cccagggagg
480
ctcctgcaaa ggctgggacc tcgggtgctg cgtcctcaac cctctcggtg accacggctc
540
aaaggagaga cctcaagggt gccaggagca cagggtgcctg ggctgcattc caggaaagag
600
acctgtccag ggaaacggat cagggtgtcg catggaagct tacgtcagag atgggtggttt
660
tggggtgatt tggacaaatt aggttagttt agcaaagctc tgaagtagca gaagcttctc
720
ccctggacta ctgattgaac acagaacaag agatgcgcgt ggcgtcagac taagtcttag
780
agagatgcag gccagtctcc tcccacaggg ccttgggact ggcaggacag acactgctac
840
atgccctcca agggcaggag tcacggtaag gagcgactgg ggtggaaaat agggaaaaaa
900
gcaacaacaa ctacatcatt tttggcattt taacatggag acagtgacaa gtggtaacaa
960
agcaaaagaa aaaaaaaact tgaagagacc aatatttaac tttcccatcc acccaagtct
1020
cacacttaag ttctagtccc atctcccca taagcaccac tgaactaaat atctatttta
1080
aagcacccaa accagtccag accctctgga aaccaagagc cccagccaca gctgtcgcct
1140
ctcttgggtc caggcgagag gagggttccg ggaaaggcac ctcataactc actcagcgca
1200
gcacacacgg cggcgagctc gggcacttga cggggacacg ggtggcagtc acggcatccg
1260
tgctgacatg tgaggaaggg gactctttgg taatcccaac tatttggtac tagagccaag
1320
caaacgtgac taaaggagc tgggtcagca gaacgggtacc ccgagtctca gcaacaggat
1380
ggcccgacg aggcaggatc caggcggggg ggagaaaaag agaccaaagc acaaggcgat
1440
cgaggctggc acagaaaggg ctgatacttc ttgcaaggac tggagaatgc acttgactgc
1500
tggctgggtc atctcttaat tggcgagtgc gcgtgacaag gctcagccct gggtccacag
1560
ggagccacca agctgactca actgatacaa atgttccac ctctgcccc ccccaagtc
1620
cccatgggtc cacaatcacc tgattttcat ttggacctct ttaacagcta aagtagatat
1680
aaatggctaa acacagatcc ccaatcccc accagggggg acacggccga ttctataatg
1740
tcgcagccag aaggctgtgg gcgtacaggc agccaagggg agaaacagaa ccgacaccgg
1800

cctaggccca tctgcaagaa aaagcggaga aggagtgacc cggatgcttc cgaagcacgc
 1860
 gagcgtgatt ttggatggag gcgggccggt gactgcctag ctgctgccgg ttcctgtaag
 1920
 ggacattttt tctgagtaaa tggcgattcc tcttccatgt ggcattctgct tggatcacga
 1980
 tgctaattgt aactggaaaag ggggtgttttg gggagtgtat tcaggagagg aagaaagaaa
 2040
 aaacttaaaa aaaaaaaaaa aacctagatt gctcaaagtt tctgcctctt ttgtaggaat
 2100
 ggtaaataca ctatgagcaa gtattttaat tcaacattaa gggaaaaaaaa aggactttgg
 2160
 aaagcataca gaaaaaaagg tagttaacgt tggatcatgt gtaaaacgga acctcagggg
 2220
 gtctaaacaa aaatgcacct tcgggtcaact tttgcttttt taaattt
 2267

<210> 5860
 <211> 96
 <212> PRT
 <213> Homo sapiens

<400> 5860
 Met Glu Glu Glu Ser Pro Phe Thr Gln Lys Lys Cys Pro Leu Gln Glu
 1 5 10 15
 Pro Ala Ala Ala Arg Gln Ser Pro Ala Arg Leu His Pro Lys Ser Arg
 20 25 30
 Ser Arg Ala Ser Glu Ala Ser Gly Ser Leu Leu Leu Arg Phe Phe Leu
 35 40 45
 Gln Met Gly Leu Gly Arg Cys Arg Phe Cys Phe Ser Pro Trp Leu Pro
 50 55 60
 Val Arg Pro Gln Pro Ser Gly Cys Asp Ile Ile Glu Ser Ala Val Ser
 65 70 75 80
 Pro Leu Val Gly Asp Trp Gly Ser Val Phe Ser His Leu Tyr Leu Leu
 85 90 95

<210> 5861
 <211> 1951
 <212> DNA
 <213> Homo sapiens

<400> 5861
 ncaattgcag ctttctatgg cggcaagtcc attctcatca cggggggccac aggctttctg
 60
 ggcaaagtgc tgatggagaa gctgtttcgc accagcccag acctgaaagt catttacatc
 120
 cttgtgaggc ccaaggctgg ccagacactg cagcagaggg ttttccagat cctagacagt
 180
 aagctatttg agaaagtcaa agaagtttgt ccaaagtgtc atgagaagat cagagctatt
 240
 tatgcagatc tcaatcagaa tgactttgcc atcagcaaag aggacatgca ggagcttctc
 300
 tcctgtacaa acataatatt tcaactgtga gccactgtac gctttgacga cactctcaga
 360

catgctgtgc aacttaacgt cactgccacc cggcagctct tgcttatggc tagtcagatg
420
ccaaagctgg aagcctttat acatatctct actgcctatt caaattgtaa cctgaagcac
480
atcgatgaag ttatctatcc gtgccctgtg gagccaaaaa aaaaaatcat tgattccctt
540
gagtgggttag acgatgctat tattgacgag attacacca agctgatcag agattggccc
600
aatatttata cctacaccaa ggccttggga gaaatggtgg tgcagcaaga gagcaggaac
660
ctgaacattg ccatcataag gccctccatt gtgggagcaa cttggcagga gcctttccca
720
ggttgggttg ataataaaa tggacctaat ggaatcatta ttgcgactgg gaaagggttt
780
cttcgggcca taaaagctac tccaatggct gtggcagacg taattccagt tgatacagtc
840
gtcaatctca tgctagctgt aggatggat actgcagttc acagacctaa gtcaacatta
900
gtctaccaca ttacatctgg taacatgaat ccttgcaatt ggcacaaaat gggagtccaa
960
gtcttgga cctttgaaaa aatcccattt gagagacctt tcaggaggcc aaatgcta
1020
tttaccagca acagcttcac atcacagtac tggaaatgcgg tcagccaccg ggccctgccc
1080
attatctatg actgctatct gcggctcact ggaaggaagc ccaggatgac aaagctcatg
1140
aatcggttt taagaactgt ttccatgttg gagtatttca tcaaccggag ttgggaatgg
1200
agcacgtaca atacagaaat gctgatgtct gagctgagtc ctgaagacca gagagtattc
1260
aactttgacg tgcgccagtt gaactgggtg gaatacattg aaaattatgt tttgggagtt
1320
aaaaaatact tattgaaaga ggatatggct gggatcccaa aagcaaagca acgcttaaaa
1380
aggctccgaa atattcacta cctctttaat actgccctct tccttatcgc ctggcgccct
1440
ctcattgcaa gatctcagat ggctcggaaat gtctgggttct tcattgtaag cttctgttat
1500
aaattcctct cctacttttag agcatccagc acgctcaaag ttaagagca ttagccatc
1560
gccttttatc tggaaacctc cagatacctc taaaacagca aactgtgatt ctcaagatta
1620
gaaagtaaca aggaatatgc ccaaactgtc aatgtcacc tgttatgtat tcgtccctat
1680
tccttaacta tgtattttta tttcagtgag agaaggaaag ttgtaaacta gcccatagtc
1740
acctatattt tagggaaaaa aatccaaatt gtttcctaac attctatttt atgcccttgc
1800
gtattaaacg tgaaagtact cccacttttc tatatttagt ttttcctttc tctctgagat
1860
gattcattta aactcagtaa atatggaaag atgcatggca gaagctgaaa tgagctcaag
1920
cagtactaac cttggaacca ttctgggtac c
1951

<210> 5862
 <211> 514
 <212> PRT
 <213> Homo sapiens

<400> 5862

```

Xaa Ile Ala Ala Phe Tyr Gly Gly Lys Ser Ile Leu Ile Thr Gly Ala
 1           5           10           15
Thr Gly Phe Leu Gly Lys Val Leu Met Glu Lys Leu Phe Arg Thr Ser
      20           25           30
Pro Asp Leu Lys Val Ile Tyr Ile Leu Val Arg Pro Lys Ala Gly Gln
      35           40           45
Thr Leu Gln Gln Arg Val Phe Gln Ile Leu Asp Ser Lys Leu Phe Glu
      50           55           60
Lys Val Lys Glu Val Cys Pro Asn Val His Glu Lys Ile Arg Ala Ile
65           70           75           80
Tyr Ala Asp Leu Asn Gln Asn Asp Phe Ala Ile Ser Lys Glu Asp Met
      85           90           95
Gln Glu Leu Leu Ser Cys Thr Asn Ile Ile Phe His Cys Ala Ala Thr
      100          105          110
Val Arg Phe Asp Asp Thr Leu Arg His Ala Val Gln Leu Asn Val Thr
      115          120          125
Ala Thr Arg Gln Leu Leu Leu Met Ala Ser Gln Met Pro Lys Leu Glu
      130          135          140
Ala Phe Ile His Ile Ser Thr Ala Tyr Ser Asn Cys Asn Leu Lys His
145          150          155          160
Ile Asp Glu Val Ile Tyr Pro Cys Pro Val Glu Pro Lys Lys Lys Ile
      165          170          175
Ile Asp Ser Leu Glu Trp Leu Asp Asp Ala Ile Ile Asp Glu Ile Thr
      180          185          190
Pro Lys Leu Ile Arg Asp Trp Pro Asn Ile Tyr Thr Tyr Thr Lys Ala
      195          200          205
Leu Gly Glu Met Val Val Gln Gln Glu Ser Arg Asn Leu Asn Ile Ala
      210          215          220
Ile Ile Arg Pro Ser Ile Val Gly Ala Thr Trp Gln Glu Pro Phe Pro
225          230          235          240
Gly Trp Val Asp Asn Ile Asn Gly Pro Asn Gly Ile Ile Ile Ala Thr
      245          250          255
Gly Lys Gly Phe Leu Arg Ala Ile Lys Ala Thr Pro Met Ala Val Ala
      260          265          270
Asp Val Ile Pro Val Asp Thr Val Val Asn Leu Met Leu Ala Val Gly
      275          280          285
Trp Tyr Thr Ala Val His Arg Pro Lys Ser Thr Leu Val Tyr His Ile
      290          295          300
Thr Ser Gly Asn Met Asn Pro Cys Asn Trp His Lys Met Gly Val Gln
305          310          315          320
Val Leu Ala Thr Phe Glu Lys Ile Pro Phe Glu Arg Pro Phe Arg Arg
      325          330          335
Pro Asn Ala Asn Phe Thr Ser Asn Ser Phe Thr Ser Gln Tyr Trp Asn
      340          345          350
Ala Val Ser His Arg Ala Pro Ala Ile Ile Tyr Asp Cys Tyr Leu Arg
      355          360          365
Leu Thr Gly Arg Lys Pro Arg Met Thr Lys Leu Met Asn Arg Leu Leu

```


| | | | |
|---|-----|-----|-----|
| 370 | 375 | 380 | |
| Arg Thr Val Ser Met Leu Glu Tyr Phe Ile Asn Arg Ser Trp Glu Trp | | | |
| 385 | 390 | 395 | 400 |
| Ser Thr Tyr Asn Thr Glu Met Leu Met Ser Glu Leu Ser Pro Glu Asp | | | |
| | 405 | 410 | 415 |
| Gln Arg Val Phe Asn Phe Asp Val Arg Gln Leu Asn Trp Leu Glu Tyr | | | |
| | 420 | 425 | 430 |
| Ile Glu Asn Tyr Val Leu Gly Val Lys Lys Tyr Leu Leu Lys Glu Asp | | | |
| | 435 | 440 | 445 |
| Met Ala Gly Ile Pro Lys Ala Lys Gln Arg Leu Lys Arg Leu Arg Asn | | | |
| | 450 | 455 | 460 |
| Ile His Tyr Leu Phe Asn Thr Ala Leu Phe Leu Ile Ala Trp Arg Leu | | | |
| 465 | 470 | 475 | 480 |
| Leu Ile Ala Arg Ser Gln Met Ala Arg Asn Val Trp Phe Phe Ile Val | | | |
| | 485 | 490 | 495 |
| Ser Phe Cys Tyr Lys Phe Leu Ser Tyr Phe Arg Ala Ser Ser Thr Leu | | | |
| | 500 | 505 | 510 |
| Lys Val | | | |

<210> 5863
 <211> 438
 <212> DNA
 <213> Homo sapiens

<400> 5863
 acgcgtaggt gtgatcttgc tgtaataatg tcccctggca ggtaagattg ctgcagccaa
 60
 ggggtgtag aggaagatcc ttaaatactc ttcttggaac agaatttggg tctctaagca
 120
 agaagtgccca gtcttaacat tcaactgtttg tgactgattt atagaaaaag gggctggatt
 180
 ctggtagccg ggggagccca ggggtgaacac tgaggttcta ccctgttcta gtggttgctt
 240
 tgattgatac tcagccatga aaggacata gtcagatac tgacaaaaca gctttgtatt
 300
 tgagtgtgtt tgtccaactg gcaaggaaca gtctggggac aaacagtgcc ttatttggag
 360
 ttgcttatte ttctcccca tggagtgacc tcagataacc tttcccagct tggaaagacc
 420
 tgaatcagat tttgtaca
 438

<210> 5864
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 5864
 Met Gly Glu Lys Asn Lys Gln Leu Gln Ile Arg His Cys Leu Ser Pro
 1 5 10 15
 Asp Cys Ser Leu Pro Val Gly Gln Thr His Ser Asn Thr Lys Leu Phe
 20 25 30
 Cys Gln Tyr Leu Ser Tyr Val Pro Phe Met Ala Glu Tyr Gln Ser Lys

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| | 35 | | | | | 40 | | | | | | 45 | | | | | | | |
| Gln | Pro | Leu | Glu | Gln | Gly | Arg | Thr | Ser | Val | Phe | Thr | Leu | Gly | Ser | Pro | | | | |
| | 50 | | | | | 55 | | | | | 60 | | | | | | | | |
| Gly | Tyr | Gln | Asn | Pro | Ala | Pro | Phe | Ser | Ile | Asn | Gln | Ser | Gln | Thr | Val | | | | |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | | | | | |
| Asn | Val | Lys | Thr | Gly | Thr | Ser | Cys | Leu | Glu | Thr | Gln | Ile | Leu | Phe | Gln | | | | |
| | | | 85 | | | | | 90 | | | | | 95 | | | | | | |
| Glu | Glu | Tyr | Leu | Arg | Ile | Phe | Leu | | | | | | | | | | | | |
| | | | 100 | | | | | | | | | | | | | | | | |

<210> 5865

<211> 1229

<212> DNA

<213> Homo sapiens

<400> 5865

```

nntccggaaa caggtgtggc ccggggcata gacttccacc atgtgtctgc tgtgctcaac
60
tttgatcttc cccaacccc tgaggcctac atccatcgag ctggcaggac agcacgcgct
120
aacaaccag gcatagtctt aacctttgtg ctcccccagg agcagttcca cttaggcaag
180
attgaggagc ttctcgtgga gagaacagg gccccattct gctcccctac cagttccgga
240
tgaggagat cgagggttc cgtatcgct gcaggtgtcc acccccagga tgccatgcgc
300
tcagtgacta agcaggccat tcgggaggca agattgaagg agatcaagga agagcttctg
360
cattctgaga agcttaagac atactttgaa gacaacccta gggacctcca gctgctgcgg
420
catgacctac ctttgacccc cgcagtgggtg aagccccacc tgggccatgt tcctgactac
480
ctggttcttc ctgctctccg tggcctggta cgcctcaca agaagcggaa gaagctgtct
540
tcctcttgta ggaaggccaa gagagcaaag tcccagaacc cactgcgcag cttcaagcac
600
aaaggaaaga aattcagacc cacagccaag cctcctgag gttgttgggc ctctctggag
660
ctgagcacat tgtggagcac aggcttacac ccttcgtgga caggcgaggc tctggtgctt
720
actgcacagc ctgaacagac agttctgggg ccggcagtgc tgggcccttt agctccttgg
780
cacttccaag ctggcatctt gccccttgac aacagaataa aaatttttagc tgccccagtt
840
tgtgcctcca gcatatgaaa aggactatth gaatccccaa aacatcagga gtcgggaaac
900
ttcgggaagac agctgtgcct ggctctgtgg ctgcatgcag tgcttcactt ggccagcaga
960
ggtcagctgt gccgagctgc cccagccatg agaagagaag cctgcccttg ctggcaggtg
1020
gctatggccg gccagagacc ttctgcccga gctcctgcag cctgctgcc tgggatcagg
1080
ctgggagatg ggccttctg accgccagcc ttctctccc cgagcacacg cacatgtaga
1140

```

ttcgggggga agctgcctgc tcttccttag aggagccggg gcagctatct gctggtcctt
 1200
 ttctgaacaa ctgttgatgt gtgaaaaaa
 1229

<210> 5866
 <211> 212
 <212> PRT
 <213> Homo sapiens

<400> 5866
 Xaa Pro Glu Thr Gly Val Ala Arg Gly Ile Asp Phe His His Val Ser
 1 5 10 15
 Ala Val Leu Asn Phe Asp Leu Pro Pro Thr Pro Glu Ala Tyr Ile His
 20 25 30
 Arg Ala Gly Arg Thr Ala Arg Ala Asn Asn Pro Gly Ile Val Leu Thr
 35 40 45
 Phe Val Leu Pro Thr Glu Gln Phe His Leu Gly Lys Ile Glu Glu Leu
 50 55 60
 Leu Val Glu Arg Thr Gly Ala Pro Phe Cys Ser Pro Thr Ser Ser Gly
 65 70 75 80
 Trp Arg Arg Ser Arg Ala Ser Ala Ile Ala Ala Gly Val His Pro Gln
 85 90 95
 Asp Ala Met Arg Ser Val Thr Lys Gln Ala Ile Arg Glu Ala Arg Leu
 100 105 110
 Lys Glu Ile Lys Glu Glu Leu Leu His Ser Glu Lys Leu Lys Thr Tyr
 115 120 125
 Phe Glu Asp Asn Pro Arg Asp Leu Gln Leu Leu Arg His Asp Leu Pro
 130 135 140
 Leu His Pro Ala Val Val Lys Pro His Leu Gly His Val Pro Asp Tyr
 145 150 155 160
 Leu Val Pro Pro Ala Leu Arg Gly Leu Val Arg Pro His Lys Lys Arg
 165 170 175
 Lys Lys Leu Ser Ser Ser Cys Arg Lys Ala Lys Arg Ala Lys Ser Gln
 180 185 190
 Asn Pro Leu Arg Ser Phe Lys His Lys Gly Lys Lys Phe Arg Pro Thr
 195 200 205
 Ala Lys Pro Ser
 210

<210> 5867
 <211> 1882
 <212> DNA
 <213> Homo sapiens

<400> 5867
 tcctatcgtg gtaccagaga tcttcctgcc atctgaggat gagtgtgggg acgtcctcgt
 60
 catgagaaag aactcatccc catcctccat taccacttat gagacctgcc agacctacga
 120
 gcgtcccatt gccttcactg cccgttccag gaagctctgg atcaacttca agacaagcga
 180
 ggccaacagc gcccgtaggct tccagattcc ctatgttacc tatgatgagg actatgagca
 240

gctggtagaa gacattgtgc gagatggccg gctctatgcc tctgaaaacc accaggagat
300
tttaaaggac aagaagctca tcaaggcctt ctttgagggtg ctagcccacc cccagaacta
360
cttcaagtac acagagaaac acaaggagat gctgccaaaa tccttcatca agctgctccg
420
ctccaaagtt tccagcttcc tgaggcccta caaatagtaa ccctaggctc agagacccaa
480
ttttttaagc cccagactc cttagccctc agagccggca gcccctacc ctcagacaag
540
gaactctctc ctctcttttt ggagggaaaa aaaaatatca ctacacaaac caggcactct
600
ccctttctgt ctttctagtt tcctttcctt gtctctctct gctgctctc ctactgttcc
660
cccttttcta acacactacc tagaaaagcc attcagtact ggctctagtc cccgtgagat
720
gtaaagaaac agtacagccc cttccactgc ccattttacc agctcacatt cccgacccca
780
tcagcttgga aggggtgctag agggccatca aggaagtggg tctggtgagg aacggggagg
840
ggaaagaagg gcttctgcca ttatagggtt gtgccttgct agtcaggggc caaaatgtcc
900
cctggctctg ctccctaggg tgattctaac agcccagggt cctgccaaag aagcctttga
960
tttacaggct taatgccagc accagtcttc tggggcacat ggtttgagct ctggacttcc
1020
cacatggcca gctttcttgt ctatacagat cctctctttc tttccctaag tctgcctggg
1080
gtctactcca taagggttta caaatggccc acaacactga gttagtggac accggctaaa
1140
tgaggaagag cagcaggcat tgtcatgggt aatgccccgc tgtagctccc tgagagaaag
1200
actgtaactc tgcaggacag aaacaagggt ttaaagcatt gccaaaaaaa agaaaacaga
1260
aagaaaaaat gtatcatcta aaggtctaga cacagaacaa ttggaagtca acttcaaaca
1320
ctaaccctt ttcttgtctt ccctggccca gccacctct cagcccatg tgatgctccc
1380
tgggggagcc ctactcccct tgctacatgt tgtccttaaa catggttatt gacctgaagc
1440
cagcctaggc cttgccctac agttgttttt cccttgtagc cccagctggc ttgtgggctt
1500
cacaaagag gacccactc tgaagccagc ctggagccac ctacctctgg cctcagggtg
1560
tgggcagcaa aaggaatgtg tgtgcacttg gcgagcctcc tgcccacct gtccacacct
1620
aataagtga atcattttga gtctttctat gttgtctaga cggaggggtt tttgtttct
1680
gggtttgttt tttgtttttg tttcttcttc ctctattagc aaaaccctat ttatagctgc
1740
ccaagagaaa agagtgtatg tttggagtgg aagaaaatcg gttttgaatc tcatgaacct
1800
tgagtgtgg agcatctgat ctgtctctat gccaccaccg gccacctaga gcccttggct
1860

gtggtaatca catgggtaat tg
1882

<210> 5868
<211> 131
<212> PRT
<213> Homo sapiens

<400> 5868
Met Arg Lys Asn Ser Ser Pro Ser Ser Ile Thr Thr Tyr Glu Thr Cys
1 5 10 15
Gln Thr Tyr Glu Arg Pro Ile Ala Phe Thr Ala Arg Ser Arg Lys Leu
20 25 30
Trp Ile Asn Phe Lys Thr Ser Glu Ala Asn Ser Ala Arg Gly Phe Gln
35 40 45
Ile Pro Tyr Val Thr Tyr Asp Glu Asp Tyr Glu Gln Leu Val Glu Asp
50 55 60
Ile Val Arg Asp Gly Arg Leu Tyr Ala Ser Glu Asn His Gln Glu Ile
65 70 75 80
Leu Lys Asp Lys Lys Leu Ile Lys Ala Phe Phe Glu Val Leu Ala His
85 90 95
Pro Gln Asn Tyr Phe Lys Tyr Thr Glu Lys His Lys Glu Met Leu Pro
100 105 110
Lys Ser Phe Ile Lys Leu Leu Arg Ser Lys Val Ser Ser Phe Leu Arg
115 120 125
Pro Tyr Lys
130

<210> 5869
<211> 910
<212> DNA
<213> Homo sapiens

<400> 5869
tgatcagtac aaagcacaag aatttcccct catctgctat aggaggtttc tctcctccct
60
tctaggggct cacaggccac aggctaacct ggtgggtcct ggcagccatc ttgggactga
120
aagaaactca ccctgacgaa gctcgcccat tagtgactgc aatttctggt tttagagttt
180
tggtattccg tgatattcaa atactaaaat acatgagttt ttattggtgt aattccatca
240
ttatttcatt atttcaacat ttaaaaaatt gcaagtctat gactcaatga ttccacagaa
300
aagacaaacg gatgggttgg cttcaagtct agactcgctt tcagagtctg tcttctccag
360
agaatcatcg cagatcacia caggcagcct tctaattatg catcacgaag cttctaccca
420
cagggttaatt cccactctgg ttcaaacagg tttgcatggt cgtcacatcc tggggagaca
480
cgtatttggg tctgcggaac accttttttag ttgtgccata gaccaggttt ttccgaacga
540
aggctgtctt ccatattcct gccagaacc aaactcatca ctccagtacc aaatccagtc
600

agtgggtgagg atgaagtgtg gaggtttggt gacagaggag gccgtggaga ggcggcgagc
 660
 ctgggtagca ccgtaagtca tggcgtaaaa gttcagacaa tgagagtgaag aggtactggc
 720
 tgactcagag cacaggatcc tttctattttt gggattgcaa tatgcctctt caataagttc
 780
 catgttggtcc aaatcctccc atttgctctc atccaagaat tgccatcgat acggcaaagt
 840
 gaaatgaact ctatggcact tatcttgaaa gctacaactt ttccggatat ggtacaaaca
 900
 gatctgatca
 910

<210> 5870
 <211> 129
 <212> PRT
 <213> Homo sapiens

<400> 5870
 Met Ile Pro Gln Lys Arg Gln Thr Asp Gly Leu Ala Ser Ser Leu Asp
 1 5 10 15
 Ser Pro Ser Glu Ser Val Phe Ser Arg Glu Ser Ser Gln Ile Thr Thr
 20 25 30
 Gly Ser Leu Leu Ile Met His His Glu Ala Ser Thr His Arg Val Ile
 35 40 45
 Pro Thr Leu Val Gln Thr Gly Leu His Gly Arg His Ile Leu Gly Arg
 50 55 60
 His Val Phe Gly Ser Ala Ala Asn Leu Phe Ser Cys Ala Ile Asp Gln
 65 70 75 80
 Val Phe Pro Asn Glu Gly Cys Leu Pro Tyr Ser Cys Gln Glu Pro Asn
 85 90 95
 Ser Ser Leu Gln Tyr Gln Ile Gln Ser Val Val Arg Met Lys Cys Gly
 100 105 110
 Gly Leu Val Thr Glu Glu Ala Val Glu Arg Arg Arg Ala Trp Val Ala
 115 120 125
 Pro

<210> 5871
 <211> 2217
 <212> DNA
 <213> Homo sapiens

<400> 5871
 ntanatttct ctctaaacac tgcctnagct gcatcccata gattgtggta cattttgtct
 60
 ttgtttctcat tggtttcaaa taacttgttt atttctgtct taattgcatt gtttaccag
 120
 tagtcattca ggagcaagtt gttcagtttc catatagatt ctgtgtgttt tagtcttgct
 180
 taaattattt ctactacttc tttgcacccc tttgctagtt ttctcagtgc cgtagggttt
 240
 attaaataat aattggactc tagtaatttt ttttaatgag agagagggaa actatatttg
 300

aaattggatt gggacattta ttttacttaa acagaagttt gcttatgaca cataatctag
360
atgggatata tcttatctat agtgtatcca cctgctgtaa gtagatactg tatttgata
420
gccattatth tgctgtaagt actttatcat tttaattaaa ttgattaaga ggaaaaaaaa
480
agaatggaat tctctttgat gcaacttttt ccccccagac cagaatccgt agaagctagc
540
cctgtggtag ttgagaaatc caacagttat ccccaccagt tatataccag cagctcacat
600
cattcacaca gttacattgg tttgccctat gcggaccata attatgggtgc tcgtcctcct
660
ccgacacctc eggcttcccc tcttccatca gtccttatta gcaaaaatga agtaggcata
720
tttaccactc ctaattttga tgaaacttcc agtgctacta caatcagcac atctgaggat
780
ggaagttagt gtactgatgt aaccaggtgc atatgtggtt ttacacatga tgatggatac
840
atgatctgtt gtgacaaatg cagcgtttgg caacatattg actgcatggg gattgatagg
900
cagcatattc ctgatacata tctatgtgaa cgttgtcagc ctaggaattt ggataaagag
960
agggcagtgc tactacaacg ccggaaaagg gaaaatatgt cagatggtga taccagtgc
1020
actgagagtg gtgatgaggt tctgtggaa ttatatactg catttcagca tactccaaca
1080
tcaattactt taactgcttc aagagtttcc aaagttaatg ataaaagaag gaaaaaaagc
1140
ggggagaaaag aacaacacat ttcaaatgt aaaaaggcat ttctggaagg atctaggaag
1200
tcatcaagag ttaagggttc agctccagag attgatcctt catctgatgg ttcaaatttt
1260
ggatgggaga caaagatcaa agcatggatg gatcgatatg aagaagcaaa taacaaccag
1320
tacagtgagg gtgttcagag ggaggcacia agaatagctc tgagattagg caatggaaat
1380
gacaaaaaag agatgaataa atccgatttg aataccaaca atttgctctt caaacctcct
1440
gtagagagcc atatacaaaa gaataagaaa attcttaaat ctgcaaaaaga tttgcctcct
1500
gatgcactta tcattgaata cagagggaag tttatgctga gagaacagtt tgaagcaaat
1560
gggtatttct ttaaaagacc ataccctttt gtgttattct actctaaatt tcatgggcta
1620
gaaatgtgtg ttgatgcaag gacttttggg aatgaggctc gattcatcag gcggtcttgt
1680
acaccaatg cagaggtgag gcatgaaatt caagatggaa ccatacatct ttatatttat
1740
tctatacaca gtattccaaa gggaactgaa attactattg cctttgattt tgactatgga
1800
aattgtaagt acaaggtgga ctgtgcatgc ctcaaagaaa acccagagtg ccctgttcta
1860
aaacgtagtt ctgaatccat ggaaaatatc aatagtgggt atgagaccag acggaaaaaa
1920

ggaaaaaaag acaaagatat ttcaaaagaa aaagatacac aaaatcagaa tattactttg
 1980
 gattgtgaag gaacgaccaa caaaatgaag agcccagaaa ctaaacaaag aaagctttct
 2040
 ccactgagac tatcagtatc aaataatcag gaaccagatt ttattgatga tatagaagaa
 2100
 aaaactccta ttagtaatga agtagaaatg gaatcagagg agcagattgc agaaaggaaa
 2160
 aggaagatga caagagaaga aagaaaaatg gaagcaattt tgcaagcttt tgccggc
 2217

<210> 5872

<211> 578

<212> PRT

<213> Homo sapiens

<400> 5872

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Phe | Ser | Leu | Met | Gln | Leu | Phe | Pro | Pro | Arg | Pro | Glu | Ser | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Ser | Pro | Val | Val | Val | Glu | Lys | Ser | Asn | Ser | Tyr | Pro | His | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Tyr | Thr | Ser | Ser | Ser | His | His | Ser | His | Ser | Tyr | Ile | Gly | Leu | Pro |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Tyr | Ala | Asp | His | Asn | Tyr | Gly | Ala | Arg | Pro | Pro | Pro | Thr | Pro | Pro | Ala |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Ser | Pro | Pro | Pro | Ser | Val | Leu | Ile | Ser | Lys | Asn | Glu | Val | Gly | Ile | Phe |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Thr | Thr | Pro | Asn | Phe | Asp | Glu | Thr | Ser | Ser | Ala | Thr | Thr | Ile | Ser | Thr |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Ser | Glu | Asp | Gly | Ser | Tyr | Gly | Thr | Asp | Val | Thr | Arg | Cys | Ile | Cys | Gly |
| | | | 100 | | | | 105 | | | | | | 110 | | |
| Phe | Thr | His | Asp | Asp | Gly | Tyr | Met | Ile | Cys | Cys | Asp | Lys | Cys | Ser | Val |
| | | 115 | | | | 120 | | | | | | 125 | | | |
| Trp | Gln | His | Ile | Asp | Cys | Met | Gly | Ile | Asp | Arg | Gln | His | Ile | Pro | Asp |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Thr | Tyr | Leu | Cys | Glu | Arg | Cys | Gln | Pro | Arg | Asn | Leu | Asp | Lys | Glu | Arg |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ala | Val | Leu | Leu | Gln | Arg | Arg | Lys | Arg | Glu | Asn | Met | Ser | Asp | Gly | Asp |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Thr | Ser | Ala | Thr | Glu | Ser | Gly | Asp | Glu | Val | Pro | Val | Glu | Leu | Tyr | Thr |
| | | | 180 | | | | 185 | | | | | | 190 | | |
| Ala | Phe | Gln | His | Thr | Pro | Thr | Ser | Ile | Thr | Leu | Thr | Ala | Ser | Arg | Val |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Ser | Lys | Val | Asn | Asp | Lys | Arg | Arg | Lys | Lys | Ser | Gly | Glu | Lys | Glu | Gln |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| His | Ile | Ser | Lys | Cys | Lys | Lys | Ala | Phe | Arg | Glu | Gly | Ser | Arg | Lys | Ser |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ser | Arg | Val | Lys | Gly | Ser | Ala | Pro | Glu | Ile | Asp | Pro | Ser | Ser | Asp | Gly |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Ser | Asn | Phe | Gly | Trp | Glu | Thr | Lys | Ile | Lys | Ala | Trp | Met | Asp | Arg | Tyr |
| | | 260 | | | | | 265 | | | | | | 270 | | |
| Glu | Glu | Ala | Asn | Asn | Asn | Gln | Tyr | Ser | Glu | Gly | Val | Gln | Arg | Glu | Ala |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Gln | Arg | Ile | Ala | Leu | Arg | Leu | Gly | Asn | Gly | Asn | Asp | Lys | Lys | Glu | Met |

290 295 300
 Asn Lys Ser Asp Leu Asn Thr Asn Asn Leu Leu Phe Lys Pro Pro Val
 305 310 315 320
 Glu Ser His Ile Gln Lys Asn Lys Lys Ile Leu Lys Ser Ala Lys Asp
 325 330 335
 Leu Pro Pro Asp Ala Leu Ile Ile Glu Tyr Arg Gly Lys Phe Met Leu
 340 345 350
 Arg Glu Gln Phe Glu Ala Asn Gly Tyr Phe Phe Lys Arg Pro Tyr Pro
 355 360 365
 Phe Val Leu Phe Tyr Ser Lys Phe His Gly Leu Glu Met Cys Val Asp
 370 375 380
 Ala Arg Thr Phe Gly Asn Glu Ala Arg Phe Ile Arg Arg Ser Cys Thr
 385 390 395 400
 Pro Asn Ala Glu Val Arg His Glu Ile Gln Asp Gly Thr Ile His Leu
 405 410 415
 Tyr Ile Tyr Ser Ile His Ser Ile Pro Lys Gly Thr Glu Ile Thr Ile
 420 425 430
 Ala Phe Asp Phe Asp Tyr Gly Asn Cys Lys Tyr Lys Val Asp Cys Ala
 435 440 445
 Cys Leu Lys Glu Asn Pro Glu Cys Pro Val Leu Lys Arg Ser Ser Glu
 450 455 460
 Ser Met Glu Asn Ile Asn Ser Gly Tyr Glu Thr Arg Arg Lys Lys Gly
 465 470 475 480
 Lys Lys Asp Lys Asp Ile Ser Lys Glu Lys Asp Thr Gln Asn Gln Asn
 485 490 495
 Ile Thr Leu Asp Cys Glu Gly Thr Thr Asn Lys Met Lys Ser Pro Glu
 500 505 510
 Thr Lys Gln Arg Lys Leu Ser Pro Leu Arg Leu Ser Val Ser Asn Asn
 515 520 525
 Gln Glu Pro Asp Phe Ile Asp Asp Ile Glu Glu Lys Thr Pro Ile Ser
 530 535 540
 Asn Glu Val Glu Met Glu Ser Glu Glu Gln Ile Ala Glu Arg Lys Arg
 545 550 555 560
 Lys Met Thr Arg Glu Glu Arg Lys Met Glu Ala Ile Leu Gln Ala Phe
 565 570 575
 Ala Gly

<210> 5873

<211> 3463

<212> DNA

<213> Homo sapiens

<400> 5873

nccgcagtc tcttccgggt gatggcggcc ggggtgcccc gatgtagccc tggcgcaagc
 60
 atctcttctt ttttccacct cgccttcgc ggattcccag cttgagaaac acctctttgc
 120
 cccgtcatgc caaagaggaa agtgaccttc caaggcgtgg gagatgagga ggatgaggat
 180
 gaaatcattg tccccaagaa gaagctggtg gacctgtgc ctgggtcagg gggtcctggg
 240
 agccgcttta aaggcaaaca ctctttggat agcgatgagg aggaggatga tgatgatggg
 300

gggtccagca aatatgacat cttggcctca gaggatgtag aaggtcagga ggcagccaca
360
ctccccagcg aggggggtgt tcggatcaca ccctttaacc tgcaggagga gatggaggaa
420
ggccactttg atgccgatgg caactacttc ctgaaccggg atgctcagat ccgagacagc
480
tggctggaca acattgactg ggtgaagatc cgggagcggc cacctggcca gcgccaggcc
540
tcagactcgg aggaggagga cagcttgggc cagacctcaa tgagtgccca agccctcttg
600
gagggacttt tggagctcct attgcctaga gagacagtgg ctggggcact gaggcgtctg
660
ggggcccag gaggaggcaa agggagaaag gggcctgggc aaccagttc ccctcagcgc
720
ctggaccggc tctccgggtt ggccgaccag atggtggccc ggggcaacct tgggtgtgtac
780
caggaaacaa gggaacggtt ggctatgcgt ctgaagggtt tggggtgtca gaccctagga
840
ccccacaatc ccacaccccc accctccctg gacatgttcg ctgaggagt tggcggaggag
900
gaactggaga cccaacccc taccagaga ggagaagcag agtcgcgggg agatgggtctg
960
gtggatgtga tgtgggaata taagtgggag aacacggggg atgccgagct gtatgggccc
1020
ttcaccagcg ccagatgca gacctgggtg agtgaaggct acttcccgga cgggtgtttat
1080
tgccggaagc tggaccccc tgggtggtcag ttctacaact ccaaacgcat tgactttgac
1140
ctctacacct gagcctgctg ggggcccagt ttggtgggcc cttctttcct ggactttgtg
1200
gaggaggcac caagtgtctc aggagcgag gaaattggag gccatttttc agtcaatttc
1260
cctttcccaa taaaagcctt tagttgtgta ctggggcctt ggctgtgctg atggccagaa
1320
gccaggggcc ttctccacag tccctttgga cttgtcttgg tccctgagta ctcccatgaa
1380
gatccttctt ggaggtgcct gtcaggtatc ctgtggcctc cctgcctgga ctctgcttgc
1440
cgtgtaaaca ccccaactg cgtgctctg tgctcctctc ccaggtttct tgttcgattc
1500
ctcttaggtc tttggctttc aggacctcag attctttatc cttgtagcca ccagaggaca
1560
gagccccaga agtggatgtt ttagggccag aaggaccagg gcatcgagaa gacattggga
1620
ccctgttggg ggtgagcatg gaacctctt actctcgctt caccctctca agctccttag
1680
atgctgggca gaagtgggat gagtggccca agaccgagat ccctaagggt ctgagagcca
1740
gtgtcttccc taatctggct ttctctatc cttgccgtcg tccccacagc ccttcagtga
1800
agtgcaaact cagtggccaa gtgtgggcca agtgtgcatt gtactggcac agagaggggc
1860
agtgactcac tggagatcac aggaatcaaa gggctggccc agaccagtg ggctccttct
1920

ccagaccttt cttggcacaa agcctttgct gcctggcctt ggaggccctg cggcctacat
1980
tctctggacc ccactatgtg cctggcacag ggctagtgcc ttgaggaaac tgaggtagct
2040
gggttggtec ccttccagga attcagagtc tgggtggcagg ggcattgggaa atagacagat
2100
gtaattctat agcctggcgc ctggcacctt ccacctccac gccccaccag cattgcctta
2160
cgctccctt gccccacgtt agatggtttc ttccggtttt gcactctggc tgcccccttg
2220
agtctcctgg ggagctgtaa tatctctttg gagattcaga ttgagctggt ctaggttgtg
2280
gcccaggcat tgggcatttt ggaagcccc aggtgttttc agcttgcagc caggccgagg
2340
gagagccctt gagtcagatc cccatggttt aggcacacct agcgggaggg gtggctcctg
2400
gacccacccg tggttggaga gctgagcatg tgtgtggctt tagtggggtc tgttagttat
2460
gggggtctgg gcactggagc tgcaggacac ttgggatccc aggtcagaaa gggccagatg
2520
agcaactagg aaagacttgg gggccagggc ggagtggggc cacctgacac tcttgtgagg
2580
ccccttctag tgctgtctca caccggaatt tcattcactc caagaagcca tcaggggtaa
2640
gataccttcc tttaaactgc actaagaaag aagaggcctg ccggtgacac agtaagatgc
2700
cattgatcta aagatgcgtc ttgatttcag aaaggtccgg aagtggaaag caggtttcag
2760
ggctgctgag gtacaggggt ctctgtagg ccccagggat ggtctcaggg gtgctgagtg
2820
cgtgcgtggg aaatggatgg agcccagggg cgcctcctgc cagtgtctc caggcactca
2880
aacctagccc ttctgaagcc gacctcacgt gacctcacag cccctcctga aggcgcctca
2940
ctgatgacgg tgggtggaat aacagcccc agagatgtcc aggtttggaa ccccaggacg
3000
tgggaaagtg ttaccttgcg tggcaaaagg gaccgcgcgc ctgtgcttca gttcaggatt
3060
tcgtggtggg gagatgaccg tggatggttg aggtggggcc tgagtaatca tgggggcctt
3120
tataaggga ggggagtcac gaggtctctg gcatgaagca aggaagcttc tggctgtgaa
3180
gatggcaaga aggcctgggg ccaggcgatg aggtggcccc tggaggagct ggaaaaggca
3240
ttggattctg ccccagagcc tccgtggaga acaaagccg cactgacaag acttcagcct
3300
gggtgaaaacc attttggact cctgacctct agaactgaac caagccggag acctggacat
3360
gcccagctcc tctgatgcc aagacctgag aggagtttct cccaaggatg gatttcaaga
3420
cggagtctcg ctctgtctcc caggctgaag tgcagtggcg cgc
3463

<210> 5874

<211> 341
 <212> PRT
 <213> Homo sapiens

<400> 5874

```

Met Pro Lys Arg Lys Val Thr Phe Gln Gly Val Gly Asp Glu Glu Asp
 1           5           10           15
Glu Asp Glu Ile Val Pro Lys Lys Lys Leu Val Asp Pro Val Pro
      20           25           30
Gly Ser Gly Gly Pro Gly Ser Arg Phe Lys Gly Lys His Ser Leu Asp
      35           40           45
Ser Asp Glu Glu Glu Asp Asp Asp Gly Gly Ser Ser Lys Tyr Asp
      50           55           60
Ile Leu Ala Ser Glu Asp Val Glu Gly Gln Glu Ala Ala Thr Leu Pro
65           70           75           80
Ser Glu Gly Gly Val Arg Ile Thr Pro Phe Asn Leu Gln Glu Glu Met
      85           90           95
Glu Glu Gly His Phe Asp Ala Asp Gly Asn Tyr Phe Leu Asn Arg Asp
      100          105          110
Ala Gln Ile Arg Asp Ser Trp Leu Asp Asn Ile Asp Trp Val Lys Ile
      115          120          125
Arg Glu Arg Pro Pro Gly Gln Arg Gln Ala Ser Asp Ser Glu Glu Glu
      130          135          140
Asp Ser Leu Gly Gln Thr Ser Met Ser Ala Gln Ala Leu Leu Glu Gly
145          150          155          160
Leu Leu Glu Leu Leu Leu Pro Arg Glu Thr Val Ala Gly Ala Leu Arg
      165          170          175
Arg Leu Gly Ala Arg Gly Gly Gly Lys Gly Arg Lys Gly Pro Gly Gln
      180          185          190
Pro Ser Ser Pro Gln Arg Leu Asp Arg Leu Ser Gly Leu Ala Asp Gln
      195          200          205
Met Val Ala Arg Gly Asn Leu Gly Val Tyr Gln Glu Thr Arg Glu Arg
      210          215          220
Leu Ala Met Arg Leu Lys Gly Leu Gly Cys Gln Thr Leu Gly Pro His
225          230          235          240
Asn Pro Thr Pro Pro Pro Ser Leu Asp Met Phe Ala Glu Glu Leu Ala
      245          250          255
Glu Glu Glu Leu Glu Thr Pro Thr Pro Thr Gln Arg Gly Glu Ala Glu
      260          265          270
Ser Arg Gly Asp Gly Leu Val Asp Val Met Trp Glu Tyr Lys Trp Glu
      275          280          285
Asn Thr Gly Asp Ala Glu Leu Tyr Gly Pro Phe Thr Ser Ala Gln Met
      290          295          300
Gln Thr Trp Val Ser Glu Gly Tyr Phe Pro Asp Gly Val Tyr Cys Arg
305          310          315          320
Lys Leu Asp Pro Pro Gly Gly Gln Phe Tyr Asn Ser Lys Arg Ile Asp
      325          330          335
Phe Asp Leu Tyr Thr
      340

```

<210> 5875
 <211> 5933
 <212> DNA
 <213> Homo sapiens

<400> 5875

cttaccattc accttcctgc agcagtgctg ctttaaggaga tacatatcca gcctcatctg
60
ncttttcttg caacctgccc ttcctcagtg tctgttgaag taagtgcaga tggggtaa
120
atgctacctt tgtccactcc tgttgtcaca agtggcctca cctacataaa aattcagctt
180
gtaaaagccg aagtagcttc tgctgtctgc cttagactac atcgtccacg ggatgccagc
240
acattaggcc tttcaciaat taaattattg gggctcactg cttttggtac cacctcttct
300
gcaacagtta ataatccatt ccttccatct gaagatcagg tatccaaaac aagtattgga
360
tggttacggt tattacatca ttgccttact cacataagtg atctagaagg aatgatggca
420
agtgcagctg cacctactgc taatctgctg cagacttgctg cggccttatt gatgtcacct
480
tactgtggaa tgcattcacc caacatcgag gttgtgcttg taaagatagg actgcagtct
540
actagaattg gcctgaagct catagacatt ctcttgagaa attgtgcagc atcaggcagt
600
gacctacag atttgaatag tcctttactt tttggaagac taaatggact ctcttctgac
660
tctacgatag atattcttta ccagcttga acaactcagg atcctggtac aaaagacaga
720
attcaggcct tgtaaaatg ggtagtgat tctgcaagag tggctgctat gaagagaagt
780
ggcaggatga actacatgtg tcctaactcc tcaacagtag agtatggtct tctgatgcc
840
tctccttctc atttgcactg tgtagcagcc attctgtggc atagttatga gctgcttgta
900
gaatatgact taccagcact cctggacca gagctctttg agttactttt taattggtcc
960
atgtctcttc cctgcaatat ggttttgaag aaagctgttg acagtctact ttgctcaatg
1020
tgtcacgtac acccaaacta tttttctttg ctcatgggct ggatgggaat taccctct
1080
ccagtgaat gtcacatag actgtccatg acagatgata gcaaaaagca ggatcttagt
1140
tcatctttaa cagatgactc taaaaatgca caagcacctc tcgcattaac tgaatcacat
1200
ttggctaccc ttgcttctc ttctcaatct cctgaagcta ttaaacaatt actagactca
1260
ggtttgctt ctcttcttgt gaggagtctg gctagtttct gctttagcca catttctagc
1320
tcagaaagca ttgccagtc aatagatatt tcccaggaca aactcaggcg ccatcatgtc
1380
ccacaacaat gtaataagat gcctatcaca gccgacctag ttgctcctat tcttaggtt
1440
ttgacagaag ttggcaatag ccatattatg aaagattggc ttggtggttc tgaagtcaat
1500
ccactatgga cagcacttct gtttttattg tgtcactctg ggtccacttc tggaagccat
1560

aatttaggtg cacaacagac cagtgaaga tcagcttctc tttcttcagc tgctacaaca
1620
ggactgacta ctcaacagcg cacagcaatt gagaatgcaa ctgttgcggt cttcttacag
1680
tgcatttcat gccatcctaa taatcaaaag ctgatggcac aggttctttg tgaactattt
1740
cagacatctc ctcaaagagg gaaccttcca acatctggga acatttcagg gtttatacga
1800
agattatttt tacagttgat gctggaagat gagaaagtga caatgtttct tcagtctcca
1860
tgtccactgt acaaaggtag aattaatgct actagccacg tcatccagca tccaatgtat
1920
ggagcaggcc acaaattccg tactcttcat ttgccagtct caacaacatt atcagatggt
1980
cttgacagag tgtcagatac tccaagtatc acagctaaat taattagtga acaaaaagat
2040
gacaaagaaa agaaaaacca tgaagagaaa gaaaaagtta aagcggaaaa tggatttcaa
2100
gacaattaca gtgttggtgt tgccctctggg ctgaagtctc aatctaaacg tgctgtgtca
2160
gctacaccac ctgcccacc atccaggagg gggaggacaa tacctgataa aataggaagt
2220
acttcaggag cagaggctgc caacaaaata attactgtcc cagtgtttca cctgtttcac
2280
aaactcttgg caggccagcc attgccagct gaaatgacac ttgccagct tttactctc
2340
ctatatgacc gaaaacttcc tcagggttac cgctcaatag atctgactgt taaattggga
2400
tcaagagtta taacagaccc cagtctatca aaaacagatt cttataaaag actacaccct
2460
gaaaaagatc atggagactt acttgctagc tgtccagaag atgaggctct cactccagg
2520
gatgaatgca tggatgggat actggatgaa tctttgcttg aaacctgtcc aattcagtca
2580
ccattacaag tttttgcagg aatgggtgga ctggctctta ttgctgaaag actacccatg
2640
ctatatccag aagtaattca acagggtgagt gctccagttg taacatctac cactcaggaa
2700
aagccgaagg atagcgatca gtttgaatgg gtgaccattg aacagtcagg ggagttagtt
2760
tatgaagcac cagaaactgt tgcggctgaa cctccaccta tcaagtcagc agtacagacc
2820
atgtctccca tacctgccc ttctttgggt gcttttggat tatttcttcg tcttcggggc
2880
tatgcggaag tgctactgaa agagagaaaa catgccaggt gccttcttcg attggtattg
2940
ggagtgcag atgatggaga aggaagtcatt attcttcaat ctccatcagc caatgtgctt
3000
ccaacccttc ctttccacgt ccttcgtagc ttgttttagca ctacaccttt gacaactgat
3060
gatgggtgtac ttctaaggcg gatggcattg gaaattggag ccttacacct cattcttctc
3120
tgtctctctg ctttgagcca ccattcccca cgagttccaa actctagcgt gaatcaaact
3180

gagccacagg tgtcaagctc tcataaccct acatcaacag aagaacaaca gttatatattgg
 3240
 gccaaagggg ctggcttttg aacaggctct acagctttctg ggtgggatgt ggaacaagcc
 3300
 ttaactaagc aaaggctgga agaggaacat gttacctgcc ttctgcaggt tcttgccagt
 3360
 tacataaatc ccgtcagtag tgcggtaaat ggagaagctc agtcatctca tgagactaga
 3420
 gggcagaaca gtaatgccct tccttctgta cttctcgagc ttctcagtca gtccctgcctc
 3480
 atcccagcca tgtcatctta tctacgaaat gattcagttc tggacatggc aagacatgtg
 3540
 ccactctatc gggcactgct ggaattgctt cgggccattg cttcttgctg tgccatgggtg
 3600
 ccctatttgt tgcccccttc tacagagaac ggtgaagagg aagaagaaca gtcagaatgt
 3660
 caaacttctg ttggtacatt gttagccaaa atgaagacct gtgttgatac ctataccaac
 3720
 cgtttaagat ctaaaaggga aaatgttaaa acaggagtaa aaccagatgc gtctgatcaa
 3780
 gaaccagaag gacttactct tttggtagca gacatccaaa agactgctga gatagtttat
 3840
 gcagccacca ccagtttgctg gcgagcaaat caggaaaaaa aactgggtga atactccaag
 3900
 aaggcggcta tgaaacccaa acctttgtca gtattaaagt cacttgaaga aaaatatgtg
 3960
 gctgttatga agaaattaca gtttgatacg tttgaaatgg tttctgaaga tgaagatggg
 4020
 aaattgggat ttaaagtaaa ttaccactac atgtctcagg tgaaaaatgc taatgatgcg
 4080
 aacagtgctg ccagagctcg ccgccttgcc caggaagctg tgacactttc aacctcactg
 4140
 cctctgtctt catcctctag tgtgtttgta cgctgtgatg aggagcgact tgatatcatg
 4200
 aaggttctaa taactggctc agcggacacc ccttatgcaa atggctgctt tgagtttgat
 4260
 gtgtattttc ctcaagatta tcccagttca cccctcttg tgaatctaga gacaactggg
 4320
 ggtcatagcg tgcgattcaa tccaaacctt tataatgatg gcaagggttg ttaagcatc
 4380
 ttaaacacgt ggcattggaag accagaagag aagtggaatc ctgagacctc aagctttttg
 4440
 caagtgttgg tgtctgtcca gtcccttata ttagtagctg agccttattt taatgaaccg
 4500
 ggatatgaac ggtctagagg cactcccagt ggcacacaga gttctcgaga atatgatgga
 4560
 aacattcgac aagcaacagt taagtgggca atgctagaac aaatcagaaa cccttcacca
 4620
 tgtttttaaag aggtaataca caaacatttt tacttgaaaa gagttgagat aatggcccaa
 4680
 tgtgaggagt ggattgcgga tatccagcag tacagcagtg ataagcgggt aggcaggact
 4740
 atgtctcacc atgcagcagc tctcaagcgt cacactgctc agctccgcga agagttgctg
 4800

aaacttccct gccctgaagg cttggatcct gacactgacg atgccccaga ggtgtgcaga
 4860
 gccacaacag gtgctgagga gactctaata catgatcagg ttaaaccag cagcagcaaa
 4920
 gaactcccca gtgacttcca gttatgagct gcattgatgt ggacttcata gacacaaagg
 4980
 cttcgaagca caagccaaat atgtcaatat ttgtatgtaa gaaactaatt atgtaatagg
 5040
 taatgaaact gaaactatac tatgccctta aggagatcca gttaaattca aggtgatctt
 5100
 ttattttacct gtacaggagt gtaaactttt ttgtgctttt atttttcaat tgtgagaacc
 5160
 actgattggt atgttcaaca aatttgtgta tacaaagaaa tggataaatc actgctatat
 5220
 aagggaact accttaggaa agaattgtta ctgaatgttt atttttattt tttttttttt
 5280
 tactatagag tgaggggttg ttaacaaaga atatatttg gtcattctta caactactat
 5340
 ttaaagtcag caacttttca ctgaatttga tagattttat gtttggccat atcttcatgc
 5400
 tcacatttga tttctgaaga cctcctacat acacttcaat aaaagttaaa tggacatact
 5460
 ccctcttttt tgatttactg gtacattttt aaaataataa atctgccata aaatgcatta
 5520
 tatctggaga cttgcacttg tatggatgaa tttattacat tcaacatatt taattttatg
 5580
 ctttctaatt ctaagatgca gaaaaaata aatgaacatg attttattct atgccaacat
 5640
 ttgggcctct gaatgtatct gttatttgaa ttaaagtatt tgaaaaggaa tgggtcaattt
 5700
 gaaagtcatt ctaaactgat tttttttt taaagggctc cttttttcct ggactatgtg
 5760
 gttttatgac taaagtcaca tgtatgtatt aaacattgag gctctgtaga ggagagagga
 5820
 tgtacctctc tgggtgctgtt acagtacatt ctgtacctgc catacaggct cattttcatg
 5880
 caaattcttc ctagagccaa ataaataaag acttaggtga aaaaaaaaaa aaa
 5933

<210> 5876

<211> 1648

<212> PRT

<213> Homo sapiens

<400> 5876

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Thr | Ile | His | Leu | Pro | Ala | Ala | Val | Leu | Leu | Lys | Glu | Ile | His | Ile |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Gln | Pro | His | Leu | Xaa | Phe | Leu | Ala | Thr | Cys | Pro | Ser | Ser | Val | Ser | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Val | Ser | Ala | Asp | Gly | Val | Asn | Met | Leu | Pro | Leu | Ser | Thr | Pro | Val |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Val | Thr | Ser | Gly | Leu | Thr | Tyr | Ile | Lys | Ile | Gln | Leu | Val | Lys | Ala | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Ala | Ser | Ala | Val | Cys | Leu | Arg | Leu | His | Arg | Pro | Arg | Asp | Ala | Ser |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| 65 | | | | | 70 | | | | | 75 | | | | 80 |
| Thr | Leu | Gly | Leu | Ser | Gln | Ile | Lys | Leu | Leu | Gly | Leu | Thr | Ala | Phe Gly |
| | | | | 85 | | | | | 90 | | | | | 95 |
| Thr | Thr | Ser | Ser | Ala | Thr | Val | Asn | Asn | Pro | Phe | Leu | Pro | Ser | Glu Asp |
| | | | 100 | | | | | 105 | | | | | 110 | |
| Gln | Val | Ser | Lys | Thr | Ser | Ile | Gly | Trp | Leu | Arg | Leu | Leu | His | His Cys |
| | | 115 | | | | | 120 | | | | | 125 | | |
| Leu | Thr | His | Ile | Ser | Asp | Leu | Glu | Gly | Met | Met | Ala | Ser | Ala | Ala Ala |
| | 130 | | | | | 135 | | | | | 140 | | | |
| Pro | Thr | Ala | Asn | Leu | Leu | Gln | Thr | Cys | Ala | Ala | Leu | Leu | Met | Ser Pro |
| 145 | | | | | 150 | | | | | 155 | | | | 160 |
| Tyr | Cys | Gly | Met | His | Ser | Pro | Asn | Ile | Glu | Val | Val | Leu | Val | Lys Ile |
| | | | | 165 | | | | | 170 | | | | | 175 |
| Gly | Leu | Gln | Ser | Thr | Arg | Ile | Gly | Leu | Lys | Leu | Ile | Asp | Ile | Leu Leu |
| | | | 180 | | | | | 185 | | | | | 190 | |
| Arg | Asn | Cys | Ala | Ala | Ser | Gly | Ser | Asp | Pro | Thr | Asp | Leu | Asn | Ser Pro |
| | 195 | | | | | | 200 | | | | | 205 | | |
| Leu | Leu | Phe | Gly | Arg | Leu | Asn | Gly | Leu | Ser | Ser | Asp | Ser | Thr | Ile Asp |
| | 210 | | | | | 215 | | | | | 220 | | | |
| Ile | Leu | Tyr | Gln | Leu | Gly | Thr | Thr | Gln | Asp | Pro | Gly | Thr | Lys | Asp Arg |
| 225 | | | | | 230 | | | | | 235 | | | | 240 |
| Ile | Gln | Ala | Leu | Leu | Lys | Trp | Val | Ser | Asp | Ser | Ala | Arg | Val | Ala Ala |
| | | | | 245 | | | | | 250 | | | | | 255 |
| Met | Lys | Arg | Ser | Gly | Arg | Met | Asn | Tyr | Met | Cys | Pro | Asn | Ser | Ser Thr |
| | | | 260 | | | | | 265 | | | | | 270 | |
| Val | Glu | Tyr | Gly | Leu | Leu | Met | Pro | Ser | Pro | Ser | His | Leu | His | Cys Val |
| | | 275 | | | | | 280 | | | | | 285 | | |
| Ala | Ala | Ile | Leu | Trp | His | Ser | Tyr | Glu | Leu | Leu | Val | Glu | Tyr | Asp Leu |
| | 290 | | | | | 295 | | | | | 300 | | | |
| Pro | Ala | Leu | Leu | Asp | Gln | Glu | Leu | Phe | Glu | Leu | Leu | Phe | Asn | Trp Ser |
| 305 | | | | | 310 | | | | | 315 | | | | 320 |
| Met | Ser | Leu | Pro | Cys | Asn | Met | Val | Leu | Lys | Lys | Ala | Val | Asp | Ser Leu |
| | | | | 325 | | | | | 330 | | | | | 335 |
| Leu | Cys | Ser | Met | Cys | His | Val | His | Pro | Asn | Tyr | Phe | Ser | Leu | Leu Met |
| | | | 340 | | | | | 345 | | | | | 350 | |
| Gly | Trp | Met | Gly | Ile | Thr | Pro | Pro | Pro | Val | Gln | Cys | His | His | Arg Leu |
| | | 355 | | | | | 360 | | | | | 365 | | |
| Ser | Met | Thr | Asp | Asp | Ser | Lys | Lys | Gln | Asp | Leu | Ser | Ser | Ser | Leu Thr |
| | 370 | | | | | 375 | | | | 380 | | | | |
| Asp | Asp | Ser | Lys | Asn | Ala | Gln | Ala | Pro | Leu | Ala | Leu | Thr | Glu | Ser His |
| 385 | | | | | 390 | | | | | 395 | | | | 400 |
| Leu | Ala | Thr | Leu | Ala | Ser | Ser | Ser | Gln | Ser | Pro | Glu | Ala | Ile | Lys Gln |
| | | | | 405 | | | | | 410 | | | | | 415 |
| Leu | Leu | Asp | Ser | Gly | Leu | Pro | Ser | Leu | Leu | Val | Arg | Ser | Leu | Ala Ser |
| | | | 420 | | | | | 425 | | | | | 430 | |
| Phe | Cys | Phe | Ser | His | Ile | Ser | Ser | Ser | Glu | Ser | Ile | Ala | Gln | Ser Ile |
| | | 435 | | | | | 440 | | | | | 445 | | |
| Asp | Ile | Ser | Gln | Asp | Lys | Leu | Arg | Arg | His | His | Val | Pro | Gln | Gln Cys |
| | 450 | | | | | 455 | | | | | 460 | | | |
| Asn | Lys | Met | Pro | Ile | Thr | Ala | Asp | Leu | Val | Ala | Pro | Ile | Leu | Arg Phe |
| 465 | | | | | 470 | | | | | 475 | | | | 480 |
| Leu | Thr | Glu | Val | Gly | Asn | Ser | His | Ile | Met | Lys | Asp | Trp | Leu | Gly Gly |
| | | | | 485 | | | | | 490 | | | | | 495 |
| Ser | Glu | Val | Asn | Pro | Leu | Trp | Thr | Ala | Leu | Leu | Phe | Leu | Leu | Cys His |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 500 | | | | 505 | | | | 510 | | | | | |
| Ser | Gly | Ser | Thr | Ser | Gly | Ser | His | Asn | Leu | Gly | Ala | Gln | Gln | Thr | Ser |
| | | 515 | | | | 520 | | | | 525 | | | | | |
| Ala | Arg | Ser | Ala | Ser | Leu | Ser | Ser | Ala | Ala | Thr | Thr | Gly | Leu | Thr | Thr |
| | | 530 | | | | 535 | | | | 540 | | | | | |
| Gln | Gln | Arg | Thr | Ala | Ile | Glu | Asn | Ala | Thr | Val | Ala | Phe | Phe | Leu | Gln |
| 545 | | | | | 550 | | | | 555 | | | | 560 | | |
| Cys | Ile | Ser | Cys | His | Pro | Asn | Asn | Gln | Lys | Leu | Met | Ala | Gln | Val | Leu |
| | | 565 | | | | 570 | | | | 575 | | | | | |
| Cys | Glu | Leu | Phe | Gln | Thr | Ser | Pro | Gln | Arg | Gly | Asn | Leu | Pro | Thr | Ser |
| | | 580 | | | | 585 | | | | 590 | | | | | |
| Gly | Asn | Ile | Ser | Gly | Phe | Ile | Arg | Arg | Leu | Phe | Leu | Gln | Leu | Met | Leu |
| | | 595 | | | | 600 | | | | 605 | | | | | |
| Glu | Asp | Glu | Lys | Val | Thr | Met | Phe | Leu | Gln | Ser | Pro | Cys | Pro | Leu | Tyr |
| | | 610 | | | | 615 | | | | 620 | | | | | |
| Lys | Gly | Arg | Ile | Asn | Ala | Thr | Ser | His | Val | Ile | Gln | His | Pro | Met | Tyr |
| 625 | | | | | 630 | | | | 635 | | | | 640 | | |
| Gly | Ala | Gly | His | Lys | Phe | Arg | Thr | Leu | His | Leu | Pro | Val | Ser | Thr | Thr |
| | | 645 | | | | 650 | | | | 655 | | | | | |
| Leu | Ser | Asp | Val | Leu | Asp | Arg | Val | Ser | Asp | Thr | Pro | Ser | Ile | Thr | Ala |
| | | 660 | | | | 665 | | | | 670 | | | | | |
| Lys | Leu | Ile | Ser | Glu | Gln | Lys | Asp | Asp | Lys | Glu | Lys | Lys | Asn | His | Glu |
| | | 675 | | | | 680 | | | | 685 | | | | | |
| Glu | Lys | Glu | Lys | Val | Lys | Ala | Glu | Asn | Gly | Phe | Gln | Asp | Asn | Tyr | Ser |
| | | 690 | | | | 695 | | | | 700 | | | | | |
| Val | Val | Val | Ala | Ser | Gly | Leu | Lys | Ser | Gln | Ser | Lys | Arg | Ala | Val | Ser |
| 705 | | | | | 710 | | | | 715 | | | | 720 | | |
| Ala | Thr | Pro | Pro | Arg | Pro | Pro | Ser | Arg | Arg | Gly | Arg | Thr | Ile | Pro | Asp |
| | | 725 | | | | 730 | | | | 735 | | | | | |
| Lys | Ile | Gly | Ser | Thr | Ser | Gly | Ala | Glu | Ala | Ala | Asn | Lys | Ile | Ile | Thr |
| | | 740 | | | | 745 | | | | 750 | | | | | |
| Val | Pro | Val | Phe | His | Leu | Phe | His | Lys | Leu | Leu | Ala | Gly | Gln | Pro | Leu |
| | | 755 | | | | 760 | | | | 765 | | | | | |
| Pro | Ala | Glu | Met | Thr | Leu | Ala | Gln | Leu | Leu | Thr | Leu | Leu | Tyr | Asp | Arg |
| | | 770 | | | | 775 | | | | 780 | | | | | |
| Lys | Leu | Pro | Gln | Gly | Tyr | Arg | Ser | Ile | Asp | Leu | Thr | Val | Lys | Leu | Gly |
| 785 | | | | | 790 | | | | 795 | | | | 800 | | |
| Ser | Arg | Val | Ile | Thr | Asp | Pro | Ser | Leu | Ser | Lys | Thr | Asp | Ser | Tyr | Lys |
| | | 805 | | | | 810 | | | | 815 | | | | | |
| Arg | Leu | His | Pro | Glu | Lys | Asp | His | Gly | Asp | Leu | Leu | Ala | Ser | Cys | Pro |
| | | 820 | | | | 825 | | | | 830 | | | | | |
| Glu | Asp | Glu | Ala | Leu | Thr | Pro | Gly | Asp | Glu | Cys | Met | Asp | Gly | Ile | Leu |
| | | 835 | | | | 840 | | | | 845 | | | | | |
| Asp | Glu | Ser | Leu | Leu | Glu | Thr | Cys | Pro | Ile | Gln | Ser | Pro | Leu | Gln | Val |
| | | 850 | | | | 855 | | | | 860 | | | | | |
| Phe | Ala | Gly | Met | Gly | Gly | Leu | Ala | Leu | Ile | Ala | Glu | Arg | Leu | Pro | Met |
| 865 | | | | | 870 | | | | 875 | | | | 880 | | |
| Leu | Tyr | Pro | Glu | Val | Ile | Gln | Gln | Val | Ser | Ala | Pro | Val | Val | Thr | Ser |
| | | 885 | | | | 890 | | | | 895 | | | | | |
| Thr | Thr | Gln | Glu | Lys | Pro | Lys | Asp | Ser | Asp | Gln | Phe | Glu | Trp | Val | Thr |
| | | 900 | | | | 905 | | | | 910 | | | | | |
| Ile | Glu | Gln | Ser | Gly | Glu | Leu | Val | Tyr | Glu | Ala | Pro | Glu | Thr | Val | Ala |
| | | 915 | | | | 920 | | | | 925 | | | | | |
| Ala | Glu | Pro | Pro | Pro | Ile | Lys | Ser | Ala | Val | Gln | Thr | Met | Ser | Pro | Ile |

| | | |
|---------------------|-------------------------|-----------------------------|
| 930 | 935 | 940 |
| Pro Ala His Ser Leu | Ala Phe Gly Leu | Phe Leu Arg Leu Pro Gly |
| 945 | 950 | 955 |
| Tyr Ala Glu Val Leu | Lys Glu Arg Lys | His Ala Gln Cys Leu Leu |
| 965 | 970 | 975 |
| Arg Leu Val Leu Gly | Val Thr Asp Asp Gly | Glu Gly Ser His Ile Leu |
| 980 | 985 | 990 |
| Gln Ser Pro Ser Ala | Asn Val Leu Pro Thr | Leu Pro Phe His Val Leu |
| 995 | 1000 | 1005 |
| Arg Ser Leu Phe Ser | Thr Thr Thr Pro Leu Thr | Thr Thr Asp Asp Gly Val Leu |
| 1010 | 1015 | 1020 |
| Leu Arg Arg Met Ala | Leu Glu Ile Gly Ala | Leu His Leu Ile Leu Val |
| 1025 | 1030 | 1035 |
| Cys Leu Ser Ala Leu | Ser His His Ser Pro | Arg Val Pro Asn Ser Ser |
| 1045 | 1050 | 1055 |
| Val Asn Gln Thr Glu | Pro Gln Val Ser Ser | His Asn Pro Thr Ser |
| 1060 | 1065 | 1070 |
| Thr Glu Glu Gln Gln | Leu Tyr Trp Ala Lys | Gly Thr Gly Phe Gly Thr |
| 1075 | 1080 | 1085 |
| Gly Ser Thr Ala Ser | Gly Trp Asp Val Glu | Gln Ala Leu Thr Lys Gln |
| 1090 | 1095 | 1100 |
| Arg Leu Glu Glu Glu | His Val Thr Cys Leu | Leu Gln Val Leu Ala Ser |
| 1105 | 1110 | 1115 |
| Tyr Ile Asn Pro Val | Ser Ser Ala Val Asn | Gly Glu Ala Gln Ser Ser |
| 1125 | 1130 | 1135 |
| His Glu Thr Arg Gly | Gln Asn Ser Asn Ala | Leu Pro Ser Val Leu Leu |
| 1140 | 1145 | 1150 |
| Glu Leu Leu Ser Gln | Ser Cys Leu Ile Pro | Ala Met Ser Ser Tyr Leu |
| 1155 | 1160 | 1165 |
| Arg Asn Asp Ser Val | Leu Asp Met Ala Arg | His Val Pro Leu Tyr Arg |
| 1170 | 1175 | 1180 |
| Ala Leu Leu Glu Leu | Leu Arg Ala Ile Ala | Ser Cys Ala Ala Met Val |
| 1185 | 1190 | 1195 |
| Pro Leu Leu Leu Pro | Leu Ser Thr Glu Asn | Gly Glu Glu Glu Glu |
| 1205 | 1210 | 1215 |
| Gln Ser Glu Cys Gln | Thr Ser Val Gly Thr | Leu Leu Ala Lys Met Lys |
| 1220 | 1225 | 1230 |
| Thr Cys Val Asp Thr | Tyr Thr Asn Arg Leu | Arg Ser Lys Arg Glu Asn |
| 1235 | 1240 | 1245 |
| Val Lys Thr Gly Val | Lys Pro Asp Ala Ser | Asp Gln Glu Pro Glu Gly |
| 1250 | 1255 | 1260 |
| Leu Thr Leu Leu Val | Pro Asp Ile Gln Lys | Thr Ala Glu Ile Val Tyr |
| 1265 | 1270 | 1275 |
| Ala Ala Thr Thr Ser | Leu Arg Arg Ala Asn | Gln Glu Lys Lys Leu Gly |
| 1285 | 1290 | 1295 |
| Glu Tyr Ser Lys Lys | Ala Ala Met Lys Pro | Lys Pro Leu Ser Val Leu |
| 1300 | 1305 | 1310 |
| Lys Ser Leu Glu Glu | Lys Tyr Val Ala Val | Met Lys Lys Leu Gln Phe |
| 1315 | 1320 | 1325 |
| Asp Thr Phe Glu Met | Val Ser Glu Asp Glu | Asp Gly Lys Leu Gly Phe |
| 1330 | 1335 | 1340 |
| Lys Val Asn Tyr His | Tyr Met Ser Gln Val | Lys Asn Ala Asn Asp Ala |
| 1345 | 1350 | 1355 |
| Asn Ser Ala Ala Arg | Ala Arg Arg Leu Ala | Gln Glu Ala Val Thr Leu |

1365 1370 1375
 Ser Thr Ser Leu Pro Leu Ser Ser Ser Ser Ser Val Phe Val Arg Cys
 1380 1385 1390
 Asp Glu Glu Arg Leu Asp Ile Met Lys Val Leu Ile Thr Gly Pro Ala
 1395 1400 1405
 Asp Thr Pro Tyr Ala Asn Gly Cys Phe Glu Phe Asp Val Tyr Phe Pro
 1410 1415 1420
 Gln Asp Tyr Pro Ser Ser Pro Pro Leu Val Asn Leu Glu Thr Thr Gly
 1425 1430 1435 1440
 Gly His Ser Val Arg Phe Asn Pro Asn Leu Tyr Asn Asp Gly Lys Val
 1445 1450 1455
 Cys Leu Ser Ile Leu Asn Thr Trp His Gly Arg Pro Glu Glu Lys Trp
 1460 1465 1470
 Asn Pro Gln Thr Ser Ser Phe Leu Gln Val Leu Val Ser Val Gln Ser
 1475 1480 1485
 Leu Ile Leu Val Ala Glu Pro Tyr Phe Asn Glu Pro Gly Tyr Glu Arg
 1490 1495 1500
 Ser Arg Gly Thr Pro Ser Gly Thr Gln Ser Ser Arg Glu Tyr Asp Gly
 1505 1510 1515 1520
 Asn Ile Arg Gln Ala Thr Val Lys Trp Ala Met Leu Glu Gln Ile Arg
 1525 1530 1535
 Asn Pro Ser Pro Cys Phe Lys Glu Val Ile His Lys His Phe Tyr Leu
 1540 1545 1550
 Lys Arg Val Glu Ile Met Ala Gln Cys Glu Glu Trp Ile Ala Asp Ile
 1555 1560 1565
 Gln Gln Tyr Ser Ser Asp Lys Arg Val Gly Arg Thr Met Ser His His
 1570 1575 1580
 Ala Ala Ala Leu Lys Arg His Thr Ala Gln Leu Arg Glu Glu Leu Leu
 1585 1590 1595 1600
 Lys Leu Pro Cys Pro Glu Gly Leu Asp Pro Asp Thr Asp Asp Ala Pro
 1605 1610 1615
 Glu Val Cys Arg Ala Thr Thr Gly Ala Glu Glu Thr Leu Met His Asp
 1620 1625 1630
 Gln Val Lys Pro Ser Ser Ser Lys Glu Leu Pro Ser Asp Phe Gln Leu
 1635 1640 1645

<210> 5877

<211> 683

<212> DNA

<213> Homo sapiens

<400> 5877

ngcggcgccg cgacgggccc cggcgccggt tccagcatga aggggagagc tggcctgggg
 60
 ggcagcatga ggtcagtggt gggcttcttg tccagcggg gcttgcatgg ggacccctg
 120
 ctcaactcagg actttcagag gagacgctg cggggctgca gaaacctcta caagaaggac
 180
 ctctcggcc acttcggctg tgtcaatgcc attgaattct ccaacaatgg aggccagtgg
 240
 ctggtctcag gaggagatga ccgcggggt ctgctatggc acatggaaca agccatccac
 300
 tccagggtca agccataca gctgaaagga gagcaccatt ccaacatttt ttgcctggct
 360

ttcaacagtg ggaacactaa agtggttctct ggaggcaatg atgagcaagt tatcctccat
 420
 gatgttgaaa gcagtgagac attggacgtg tttgctcatg aagatgcagt atatggcttg
 480
 tctgtgagcc cagtgaatga caacattttt gccagttcct cagatgatgg cggggttctc
 540
 atttgggaca ttcgggaatc ccccatgga gagcccttct gctgggcaaa ctatccatca
 600
 gcctttcata gtgtcatgtt taaccctgtg gagcccaggt tgttggcccc agccaattca
 660
 aaggaaggag tgggactctg gga
 683

<210> 5878

<211> 227

<212> PRT

<213> Homo sapiens

<400> 5878

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Gly | Gly | Ala | Thr | Gly | Gly | Gly | Gly | Gly | Ser | Ser | Met | Lys | Gly | Arg |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Ala | Gly | Leu | Gly | Gly | Ser | Met | Arg | Ser | Val | Val | Gly | Phe | Leu | Ser | Gln |
| | | 20 | | | | | 25 | | | | | 30 | | | |
| Arg | Gly | Leu | His | Gly | Asp | Pro | Leu | Leu | Thr | Gln | Asp | Phe | Gln | Arg | Arg |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Arg | Leu | Arg | Gly | Cys | Arg | Asn | Leu | Tyr | Lys | Lys | Asp | Leu | Leu | Gly | His |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Phe | Gly | Cys | Val | Asn | Ala | Ile | Glu | Phe | Ser | Asn | Asn | Gly | Gly | Gln | Trp |
| 65 | | | 70 | | | | | 75 | | | | | | 80 | |
| Leu | Val | Ser | Gly | Gly | Asp | Asp | Arg | Arg | Val | Leu | Leu | Trp | His | Met | Glu |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Gln | Ala | Ile | His | Ser | Arg | Val | Lys | Pro | Ile | Gln | Leu | Lys | Gly | Glu | His |
| | | 100 | | | | | 105 | | | | | 110 | | | |
| His | Ser | Asn | Ile | Phe | Cys | Leu | Ala | Phe | Asn | Ser | Gly | Asn | Thr | Lys | Val |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Phe | Ser | Gly | Gly | Asn | Asp | Glu | Gln | Val | Ile | Leu | His | Asp | Val | Glu | Ser |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ser | Glu | Thr | Leu | Asp | Val | Phe | Ala | His | Glu | Asp | Ala | Val | Tyr | Gly | Leu |
| 145 | | | | 150 | | | | | | 155 | | | | 160 | |
| Ser | Val | Ser | Pro | Val | Asn | Asp | Asn | Ile | Phe | Ala | Ser | Ser | Ser | Asp | Asp |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Gly | Arg | Val | Leu | Ile | Trp | Asp | Ile | Arg | Glu | Ser | Pro | His | Gly | Glu | Pro |
| | | 180 | | | | | 185 | | | | | 190 | | | |
| Phe | Cys | Trp | Ala | Asn | Tyr | Pro | Ser | Ala | Phe | His | Ser | Val | Met | Phe | Asn |
| | 195 | | | | | 200 | | | | | 205 | | | | |
| Pro | Val | Glu | Pro | Arg | Leu | Leu | Ala | Pro | Ala | Asn | Ser | Lys | Glu | Gly | Val |
| | 210 | | | | 215 | | | | | | 220 | | | | |
| Gly | Leu | Trp | | | | | | | | | | | | | |
| 225 | | | | | | | | | | | | | | | |

<210> 5879

<211> 1555

<212> DNA

<213> Homo sapiens

<400> 5879

```

tttttttttt tttttttttt ttttgaacag ggaaagttaa atatagagaa ttactggctt
60
taacagtgaa ctggaataat gagggttca ctggtaaaat gcttctgaat tgactggaaa
120
tccatttggg gtgctgggga acgttattcc cagagaggtg cctcagtga ggcgctgtgt
180
ctcctacgca acttctgagg gctggagggt gccaagggca gctgctgacc gcctggtgct
240
tcaggagctg ggtgctgggg aagccacatg cactgcggcg tccagaggca gaagcacaac
300
caacaagaac cacgaaggag gcgcctttcc tcctataatg cctgttttgt gccctctact
360
gacaaagctt atcccccttc aaaaaacagc caactgaaaa agctgaattt ggaacataaa
420
gtcaataaat ccataaccag caatactatg gggcctgggg tgcgctggcc tttagttagt
480
ggagtggggc gaaggatgct gcatgtcctg cagtgggcac agcggccctg cacgggggag
540
aaccatccct gtaaagtgtc agtagtagcc cctgtgtcag tcagggtccc tgcaagaaat
600
ggcagtgcac tcacataagg acagtttgag aagagtctcc tgacaagggt agtgtggctc
660
tctgcggcta ctaacagcct gagcctttac ctcccaggc ctgaacaggg gcatggaaaag
720
ggctgcctga cagggtgaca ggagctgtga cctttagcca agggcagcca ggaataaata
780
ctgggaactc acgctctctc ctgtgattgg ccagcaccac tccccaccc tgacgttagg
840
tgaagacaaa tggaagccag aagtgtggtg agctaccaga cattccatgc agcccgtga
900
gaagccacgt gagtggggac agggctaaag gctaggcagg gacagggctg gctgtgtccc
960
gaggctgctc ctccggccct gacttcaggc cctcagccca gtcgactccc acaacctcgc
1020
aattgggcag catctcctcc accaatatct gagtgaggcc agggttggac acggcagggg
1080
ggtccgagat gtccagcctg cggagggttc gaggttatcc aggcctcgt agttgatgtc
1140
acagtcaccg gcatccacag cttcgacagg cacttcacag aaattccaga actcctgaga
1200
gaaatggcca tacttatctg gcctgatcca ctcttgtct cgaaacttga ctgcgcctcc
1260
ctgcttcagg atgaaaaagg cacctgcgcc gtatggacca tgttgcttct ccagccaggt
1320
gtaagatcga tttttctcat gcaccttgta catctccctt tggagcaagt aatccctcag
1380
agcctccaca tcgtagaaat agttggtcag gaactggagt attgtccttt tcttcttctg
1440
actgcctct ggggccactg ccgcacccag gcgatggatg cccctgatac gccattcca
1500
catgggggag accaggcgca gggacgccc gggagccgcc atcttgctaa gggtt
1555

```

<210> 5880
 <211> 185
 <212> PRT
 <213> Homo sapiens

<400> 5880
 Met Ala Ala Pro Trp Ala Ser Leu Arg Leu Val Ala Pro Met Trp Asn
 1 5 10 15
 Gly Arg Ile Arg Gly Ile His Arg Leu Gly Ala Ala Val Ala Pro Glu
 20 25 30
 Gly Ser Gln Lys Lys Lys Arg Thr Ile Leu Gln Phe Leu Thr Asn Tyr
 35 40 45
 Phe Tyr Asp Val Glu Ala Leu Arg Asp Tyr Leu Leu Gln Arg Glu Met
 50 55 60
 Tyr Lys Val His Glu Lys Asn Arg Ser Tyr Thr Trp Leu Glu Lys Gln
 65 70 75 80
 His Gly Pro Tyr Gly Ala Gly Ala Phe Phe Ile Leu Lys Gln Gly Gly
 85 90 95
 Ala Val Lys Phe Arg Asp Lys Glu Trp Ile Arg Pro Asp Lys Tyr Gly
 100 105 110
 His Phe Ser Gln Glu Phe Trp Asn Phe Cys Glu Val Pro Val Glu Ala
 115 120 125
 Val Asp Ala Gly Asp Cys Asp Ile Asn Tyr Glu Gly Leu Asp Asn Leu
 130 135 140
 Arg Thr Ser Ala Gly Trp Thr Ser Arg Thr Ser Leu Pro Cys Pro Thr
 145 150 155 160
 Leu Ala Ser Leu Arg Tyr Trp Trp Arg Arg Cys Cys Pro Ile Ala Arg
 165 170 175
 Leu Trp Glu Ser Thr Gly Leu Arg Ala
 180 185

<210> 5881
 <211> 327
 <212> DNA
 <213> Homo sapiens

<400> 5881
 ngcgcgcccc ggcccggtggc ccgcgagaag acctcgctgg gcagcttgaa gcgcgccagc
 60
 gtggacgtgg acctgctggc cccgcgcagc cccatggcca aggagaacat ggtgaccttc
 120
 agccacacgc tgcccagggc cagcgcgccc tcgctggacg accccgcgcg ccgccacatg
 180
 accatccacg tgccgctgga cgctcgcgc tccaagcagc tcatcagcga gtggaagcag
 240
 aagagcctgg agggccgcgg cctggggctg cccgacgacg ccagccccgg gcacctgccc
 300
 gcgccccgcg aacctatgcc ggaggan
 327

<210> 5882
 <211> 109
 <212> PRT

<213> Homo sapiens

<400> 5882

```

Xaa Ala Pro Arg Pro Val Ala Arg Glu Lys Thr Ser Leu Gly Ser Leu
 1           5           10           15
Lys Arg Ala Ser Val Asp Val Asp Leu Leu Ala Pro Arg Ser Pro Met
          20           25           30
Ala Lys Glu Asn Met Val Thr Phe Ser His Thr Leu Pro Arg Ala Ser
          35           40           45
Ala Pro Ser Leu Asp Asp Pro Ala Arg Arg His Met Thr Ile His Val
          50           55           60
Pro Leu Asp Ala Ser Arg Ser Lys Gln Leu Ile Ser Glu Trp Lys Gln
65           70           75           80
Lys Ser Leu Glu Gly Arg Gly Leu Gly Leu Pro Asp Asp Ala Ser Pro
          85           90           95
Gly His Leu Arg Ala Pro Ala Glu Pro Met Pro Glu Xaa
          100          105

```

<210> 5883

<211> 579

<212> DNA

<213> Homo sapiens

<400> 5883

```

nggtcgacct ctgcttcctt acagcacccc cacctgccag agctgacct ccctaggccc
60
tgcctaacct tgagttggcc cccaatccct ctggctgcag aagtccccctt acccccaatg
120
agaggagggg caggaccaga tcttttgaga gctgagggtt gagggcattg agccaacaca
180
cagatttgtc gcctctgtcc ccgaagacac ctgcaccctc catgcggagc caagatgggg
240
aatggaactg aggaagatta taactttgtc ttcaagggtg tgctgatcgg cgaatcaggt
300
gtggggaaga ccaatctact ttcccgatc acgcgcaatg agttcagcca cgacagccgc
360
accaccatcg gggttgagtt ctccaccgc actgtgatgt tgggcaccgc tgctgtcaag
420
gctcagatct gggacacagc tgggtgttga cctaaccaag caccagacct atgctgtggt
480
ggagcgatgg ctgaaggagc tctatgacca tgctgaagcc acgatcgtcg tcatgctcgt
540
gggtaacaaa agtgacctca gccaggcccg ggaagtgcc
579

```

<210> 5884

<211> 71

<212> PRT

<213> Homo sapiens

<400> 5884

```

Met Gly Asn Gly Thr Glu Glu Asp Tyr Asn Phe Val Phe Lys Val Val
 1           5           10           15
Leu Ile Gly Glu Ser Gly Val Gly Lys Thr Asn Leu Leu Ser Arg Phe

```


ttgttctctt tctttgaaca ctgacccttg gacaacattt atcataattt gtcataacca
 1260
 ctgctgagtg gccttgagga cgaaccccg c agggagcaag cagtacagtg gcattcccag
 1320
 ggggaccagc agctacccaa ggagaacccat gcatgaacag tatcagtcgt ctgggctcat
 1380
 gctgggatgt cgcagtgtct ctgttgcaac tcttcccagc cagccagggt tgctgggggc
 1440
 caggctgggt gtcctcacag gaggtagggc tacaccaat tccaaaagcc tgagaagaga
 1500
 gaagtggagg gggaggcgag tgtgtgaata aaggctccca tcaggtcaaa aaaaaaaaaa
 1560
 aaagaaaaca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaactccgg gggggggccc
 1620
 agtaccatt ttgcccttta agtgggggct atttaacctt taacttggcc ccggtttttt
 1680
 aaacctcttg atcttgggga aacccgggg gggtttcccc cttttaattg cccttttaag
 1740
 ggcaccccc tcttttgcca ctgggggaat ttttgccaag ggggcccccc atttagcctt
 1800
 tttccaagct tttggacgcc catttgggag ttggccattt tagcgttatt tttttttttt
 1860
 taattacggc gggactattt tgttttaaat cgaccctctt ttttt
 1905

<210> 5886

<211> 265

<212> PRT

<213> Homo sapiens

<400> 5886

Met Ala Thr Leu Leu Arg Pro Val Leu Arg Arg Leu Cys Gly Leu Pro
 1 5 10 15
 Gly Leu Gln Arg Pro Ala Ala Glu Met Pro Leu Arg Ala Arg Ser Asp
 20 25 30
 Gly Ala Gly Pro Leu Tyr Ser His His Leu Pro Thr Ser Pro Leu Gln
 35 40 45
 Lys Ala Leu Leu Ala Ala Gly Ser Ala Ala Met Ala Leu Tyr Asn Pro
 50 55 60
 Tyr Arg His Asp Met Val Ala Val Leu Gly Glu Thr Thr Gly His Arg
 65 70 75 80
 Thr Leu Lys Val Leu Arg Asp Gln Met Arg Arg Asp Pro Glu Gly Ala
 85 90 95
 Gln Ile Leu Gln Glu Arg Pro Arg Ile Ser Thr Ser Thr Leu Asp Leu
 100 105 110
 Gly Lys Leu Gln Ser Leu Pro Glu Gly Ser Leu Gly Arg Glu Tyr Leu
 115 120 125
 Arg Phe Leu Asp Val Asn Arg Val Ser Pro Asp Thr Arg Ala Pro Thr
 130 135 140
 Arg Phe Val Asp Asp Glu Glu Leu Ala Tyr Val Ile Gln Arg Tyr Arg
 145 150 155 160
 Glu Val His Asp Met Leu His Thr Leu Leu Gly Met Pro Thr Asn Ile
 165 170 175
 Leu Gly Glu Ile Val Val Lys Trp Phe Glu Ala Val Gln Thr Gly Leu

| | | | | | |
|-------------|-----------------|-------------|-------------|-------------|-----|
| | 180 | | 185 | | 190 |
| Pro Met Cys | Ile Leu Gly Ala | Phe Phe Gly | Pro Ile Arg | Leu Gly Ala | |
| 195 | | 200 | | 205 | |
| Gln Ser Leu | Gln Val Leu Val | Ser Glu Leu | Ile Pro Trp | Ala Val Gln | |
| 210 | | 215 | | 220 | |
| Asn Gly Arg | Arg Ala Pro Cys | Val Leu Asn | Leu Tyr Tyr | Glu Arg Arg | |
| 225 | | 230 | | 235 | 240 |
| Trp Glu Gln | Ser Leu Arg | Ala Leu Arg | Glu Glu Leu | Gly Ile Thr | Ala |
| | 245 | | 250 | | 255 |
| Pro Pro Met | His Val Gln | Gly Leu Ala | | | |
| | 260 | | 265 | | |

<210> 5887

<211> 3779

<212> DNA

<213> Homo sapiens

<400> 5887

```

gccggcgaca gcaggcaagg cgggcggcgc ggccgtggtc atcaccgaac ccgagcacac
60
caaggagcgc gtcaaacttg aagggtcaaa gtgcaaaggg cagcttttga tttttggggc
120
aaccaactgg gacttgattg gtcgaaaaga agtgccctaaa cagcaagctg cttaccgcaa
180
tctcggtcag aatttgtggg ggccccacag atatgggtgc ctggcggggg tccgggtgcg
240
gacagtggtc tcgggctcgt gtgctgcaca cagcctcctc atcaccacgg aagggcagct
300
gtggagctgg ggtcgaaatg agaaggggca gctgggacat ggtgacacca agagagtaga
360
agcccctaga ctcatcgagg gtcttagcca cgaagtgatt gtgtctgcag catgtgggcg
420
gaaccacacc ttggccttga cggaaacggg ctccgtgttt gcgtttgggg aaaacaagat
480
ggggcagctg ggcccttgga accagacaga cgctgttccc agccccgcgc agataatgta
540
caacggccag ccaattacca aaatggcctg tggggctgaa ttcagtatga taatggactg
600
caaaggaaac ctctattcct ttgggtgccc tgaatatggt cagctgggac acaactcaga
660
tgggaagtgc atcgccggg cacagcggat agagtacgac tgtgaactag ttccccggcg
720
agtggccatc ttcattgaga agacgaaaga tggacagatt ctgcctgtac caagcggaag
780
tgggaggagg accgggacac cgtggtcgaa gggctgaggc gcctgtcgga ctaccccgag
840
tacatgtggg ttctcctgta ctgcgagggg acgcgttca cggagaccaa gcaccgcgtt
900
agcatggagg tggcggctgc taaggggctt cctgtcctca agtaccacct gctgccgcgg
960
accaagggct tcaccaccgc agtcaagtgc ctccggggga cagtcgcagc tgtctatgat
1020
gtaaccctga acttcagagg aaacaagaac ccgtccctgc tggggatcct ctacgggaag
1080

```

aagtacgagg cggacatgtg cgtgaggaga tttcctctgg aagacatccc gctggatgaa
1140
aaggaagcag ctcaagtggct tcataaactg taccaggaga aggacgcgct ccaggaggta
1200
aagactctgg atggcatgtt tccaggggag cagtttttaga ctccctccccg gagccgttgg
1260
accctcctga acttctctgtc ctggggccacc attctcctgt ctccctctctt cagtttttng
1320
tcttggggcgt ctttgccagc ggatcacctc tcttgatcct gactttcttg gggtttgtgg
1380
gagcagcttc ctttgaggtt cgcagactga taggagtaac tgagatagaa aaagggctcc
1440
agctacggaa accaagagtt taagaaaaag gaataattaa tggctgtgac tgaacacacg
1500
cggccctgac ggtggtatcc agttaactca aaaccaacac acagagtgcg gggaaagaca
1560
attagaaact atttttctta ttaactggtg actaatatta acaaaacttg agccaagagt
1620
aaagaattca gaaggcctgt caggtgaagt cttcagcctc ccacagcgca ggggtccagc
1680
atctccacgc gcgcccgtgg gaggtgggtc cggccggaga ggctctccgc ggacgcctc
1740
tctccagaac tccgcttcca agagggagcc tttggctgct ttctctctt aaacttagat
1800
caaatttttt ggtttttaat cagttatctt gggaaactta cctggccctt cacctcttct
1860
gcaccccccg ccccgaaac tgtctcgtaa tgaatttctg ctgtctctt gggagtggac
1920
ggccgggtcc cgtcccccg gagcatcgtc cggctcagca ccttggtcc cagtgggggc
1980
ccggtggagg gcgcccgtag tgataagcac accggcacga acgtcaggtc cattctctga
2040
agtccggagcc ctcaactctgc cctgtctctgg ggctggctga gggcgaacgc cccacctcac
2100
tttctagagc cctgtctgtc ctagctccta tctgaccttg tgtgtaaata cgtacatctg
2160
tttttaaagt ggatgggccc ctgagaactc agtgaaatgc agagttctcc atgcacctaa
2220
agctcctttg tcgtctctcat ggctgtcaga tcttgggtccc tccacactgg gtgctgggga
2280
gggaggaccc tgggggtac cgcgcgcccc cccatccac agatcaggag ccaaggaggg
2340
agaacagggc agcctgtggg actctaggat gcttcagaag aagcgacggc accgtcaacc
2400
ctctgttttt taaagggtgt tggagactgt taacactgag ctcatgtact tctagagatt
2460
ttatttttac tggttgatct cttggtgggt ttcaacttcc tgctggaaac tagagggtggg
2520
gcacccccca cccccagcc tcgcactgtg tccttgggga gggcccgccc ccatcctggc
2580
cgggtgtcact gtggcccggc caccctgag cgcctcagct cctacctctt ggacgtctct
2640
gagagtccag gcagagcaga gggcagcgct cggccgggtca tgctgggtcc cttggccttg
2700

cagcgagccc ctggcccacg ccgagcgagg gatgcttctc cctacagcat gtccactccc
 2760
 ccggcatggc caggtggggc ccctggggca atggcagtg tagaacgctc aacttggttg
 2820
 cgggtaccatc agcccacctg catttggtt tgcacttgct tgttctaagt cacagcgccc
 2880
 tcatcttttt agcaaggtaa aaaaaccaa atgggtgtta tctctgatat cttgaaacca
 2940
 gcgttctgaa tagaggtagg ttgagttttc taggggaaaa caaatggaga aaagaggcat
 3000
 gaagaaaagt aaaccgagaa cataattagg catcgggcct aagtgtcctg gggagattgg
 3060
 aggggacggc agcgttctgc atgatggagg cgctgccggg ccccggtct gtggggggcg
 3120
 tgctctcagg gcgtgtgcgg gacgccacct gtgcacacct gctcagagca cggctcctcg
 3180
 caggggtgaa ggggcagacc aacgaaacca gatgagacca acgacaccat gcgagacacg
 3240
 cttgcagaca ctgttggttt ggaaatgtgc ttcctccat ctgaaatctc atccctccac
 3300
 ccgcccactc gggcagctgt gccgtgggca gggcatgcgc tcccctggct gagcacccca
 3360
 gagattctcc tgcaccttcc tcatgccgca cgctgctcat ccgtctccat gtgtgttttag
 3420
 atccatgcca ttcactgact cactaacacc tgcaaaatct ttaaggaaaa aagctgaagg
 3480
 gtacgaccat gcacatatgt gacctggaaa atgcaaattt agatctttta tgatttaatt
 3540
 gttattgttt cccatagaag ttcctccct ttgaaattaa tatataatgt ataaattctg
 3600
 cactgagcca tggcggagct gggcagcccc taggttagag tggagacgga ggcccaggcg
 3660
 caggggtcac acctcatctg gtttccttcc catctcacag cttagcttgt gcttctcaac
 3720
 accaagtctt taagagcaat aaaaactaca ccatgaaaaa aaaaaaaaaa aaaaaaaaaa
 3779

<210> 5888

<211> 166

<212> PRT

<213> Homo sapiens

<400> 5888

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asp | Glu | Arg | Trp | Thr | Asp | Ser | Ala | Cys | Thr | Lys | Arg | Lys | Trp | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Asp | Arg | Asp | Thr | Val | Val | Glu | Gly | Leu | Arg | Arg | Leu | Ser | Asp | Tyr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Glu | Tyr | Met | Trp | Phe | Leu | Leu | Tyr | Cys | Glu | Gly | Thr | Arg | Phe | Thr |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Glu | Thr | Lys | His | Arg | Val | Ser | Met | Glu | Val | Ala | Ala | Ala | Lys | Gly | Leu |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Pro | Val | Leu | Lys | Tyr | His | Leu | Leu | Pro | Arg | Thr | Lys | Gly | Phe | Thr | Thr |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ala | Val | Lys | Cys | Leu | Arg | Gly | Thr | Val | Ala | Ala | Val | Tyr | Asp | Val | Thr |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| | | | | 85 | | | | | 90 | | | | | 95 | | | |
| Leu | Asn | Phe | Arg | Gly | Asn | Lys | Asn | Pro | Ser | Leu | Leu | Gly | Ile | Leu | Tyr | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | |
| Gly | Lys | Lys | Tyr | Glu | Ala | Asp | Met | Cys | Val | Arg | Arg | Phe | Pro | Leu | Glu | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | |
| Asp | Ile | Pro | Leu | Asp | Glu | Lys | Glu | Ala | Ala | Gln | Trp | Leu | His | Lys | Leu | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | |
| Tyr | Gln | Glu | Lys | Asp | Ala | Leu | Gln | Glu | Val | Lys | Thr | Leu | Asp | Gly | Met | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | |
| Phe | Pro | Gly | Glu | Gln | Phe | | | | | | | | | | | | |
| | | | | 165 | | | | | | | | | | | | | |

<210> 5889

<211> 2198

<212> DNA

<213> Homo sapiens

<400> 5889

gctagccgctc cgagccgagc cgtccgagcc ggggaagccg ggcgcgtgct gccgctcgtg
 60
 gcgggcccag acagtcttgc actgtttcct aggcctggagt gcagtggcac aatcacagct
 120
 cactgcagcc ttgacttccc aggcctcaagc cattctccta cctcagcctc ccaagcagtt
 180
 gggaccacag gagaggagag gcagcagcat ggcgagtgtc ctgtcccgac gccttggaaa
 240
 gcgggtccctc ctgggagccc ggggtgttggg acccagtgcc tcggaggggc cctcggctgc
 300
 cccaccctcg gagccactgc tagaaggggc cgctccccag cctttcacca cctctgatga
 360
 caccctctgc caggagcagc ccaaggaagt ccttaaggct cccagcacct cgggccttca
 420
 gcaggtggcc tttcagcctg ggcagaaggt ttatgtgtgg tacgggggtc aagagtgcac
 480
 aggactggtg gagcagcaca gctggatgga gggtcagggt accgtctggc tgctggagca
 540
 gaagctgcag gtctgtgtgca ggggtggagga ggtgtggctg gcagagctgc agggccctg
 600
 tccccaggca ccaccctgg agcccggagc ccaggccctg gcctacaggc ccgtctccag
 660
 gaacatcgat gtcccaaaga ggaagtcgga cgcagtggaa atggatgaga tgatggcggc
 720
 catggtgctg acgtccctgt cctgcagccc tgttgtacag agtcctcccg ggaccgaggc
 780
 caacttctct gcttcccgtg cggcctgcga cccatggaag gagagtgggt acatctcgga
 840
 cagcggcagc agcactacca gcggtcactg gagtgggagc agtgggtgtc ccaccctc
 900
 gccccccac ccccaggcca gcccgaagta tttgggggat gcttttggtt ctccccaaac
 960
 tgatcatggc tttgagaccg atcctgaccc tttcctgctg gacgaaccag ctccacgaaa
 1020
 aagaaagaac tctgtgaagg tgatgtacaa gtgcctgtgg ccaaactgtg gcaaagttct
 1080

gcgctccatt gtgggcatca aacgacacgt caaagccctc catctggggg acacagtggg
 1140
 ctctgatcag ttcaagcggg aggaggattt ctactacaca gaggtgcagc tgaaggagga
 1200
 atctgctgct gctgctgctg ctgctgccgc aggcacccca gtccctggga ctcccacctc
 1260
 cgagccagct cccaccccca gcatgactgg cctgcctctg tctgctcttc caccacctct
 1320
 gcacaaagcc cagtcctccg gcccagaaca tcctggcccg gagtcctccc tgccctcagg
 1380
 ggctctcagc aagtcagctc ctgggtcctt ctggcacatt caggcagatc atgcatacca
 1440
 ggctctgcc a tccttcaga tcccagtctc accacacatc tacaccagtg tcagctgggc
 1500
 tgctgcccc tccgcgcct gctctctctc tccgggtccg agccgggtcg taagcttcag
 1560
 cgagccccag cagccagcac ctgcgatgaa atctcatctg atcgtcactt ctccaccccg
 1620
 ggcccagagt ggtgccagga aagcccgagg ggaggctaag aagtgccgca aggtgtatgg
 1680
 catcgagcac cgggaccagt ggtgcacggc gtgccggtgg aagaaggcct gccagcgctt
 1740
 tctggactga gctgtgctgc aggttctact ctgttcttgg ccctgccggc agccactgac
 1800
 aagaggccag tgtgtcacca gccctcagca gaaaccgaaa gagaaagaac ggaaacacgg
 1860
 agtttgggct ctgttggcta aggtgtaaca cttaaagcaa ttttctccca ttgtgcgaac
 1920
 attttatttt ttaaaaaaaaa gaaacaaaaa tatttttccc ctaaaaatag gagagagcca
 1980
 aaactgacca aggctattca gcagtgaacc agtgaccaa gaattaatta ccctccgttt
 2040
 cccacatccc cactctctag gggattagct tgtgcgtgtc aaaagaagga acagctcggt
 2100
 ctgcttctg ctgagtcggt gaattctttg ctttctaaac tcttcagaa aggactgtga
 2160
 gcaagatgaa ttacttttc ttaaaaaaaaa aaaaaaaaa
 2198

<210> 5890

<211> 118

<212> PRT

<213> Homo sapiens

<400> 5890

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ser | Arg | Pro | Ser | Arg | Ala | Val | Arg | Ala | Gly | Glu | Ala | Gly | Arg | Val |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Leu | Pro | Leu | Val | Ala | Gly | Arg | Asp | Ser | Leu | Ala | Leu | Phe | Pro | Arg | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Cys | Ser | Gly | Thr | Ile | Thr | Ala | His | Cys | Ser | Leu | Asp | Phe | Pro | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Ser | His | Ser | Pro | Thr | Ser | Ala | Ser | Gln | Ala | Val | Gly | Thr | Thr | Gly |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Glu | Arg | Gln | Gln | His | Gly | Glu | Cys | Pro | Val | Pro | Thr | Pro | Trp | Lys |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65 | | 70 | | 75 | | 80 | | | | | | | | | |
| Ala | Val | Pro | Pro | Gly | Ser | Pro | Gly | Val | Gly | Thr | Gln | Cys | Leu | Gly | Gly |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Ala | Leu | Gly | Cys | Pro | Thr | Leu | Gly | Ala | Thr | Ala | Arg | Arg | Gly | Arg | Ser |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Pro | Ala | Phe | His | His | Leu | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | |

<210> 5891

<211> 1459

<212> DNA

<213> Homo sapiens

<400> 5891

```

nggtgagaca ggggtctcact gtcgcccagg catgagtgc gcagaaacag cctatagacg
60
ccacgagtcg gcggcgctac cgaggggctg tgggcgcgca gctggaacct ccggctgtca
120
gtgcgcttac agttcctaac cccgacctg cgcgagccc gcactatggc agccccgccg
180
cagctaaggg ctctgctcgt agtcgtcaac gcactgctgc gcaagcgccg ctaccacgct
240
gcgttgggcg tgcttaaggg ctcccggaac ggggctgtct atggagccaa aatccgggcc
300
cctcacgcgc tggatcatgac ctttctcttc cggaatggca gcctccagga gaagctgtgg
360
gccatactgc aggccacata tatccactcc tggaaacctg cagggtttgt gttcacctac
420
aagggtctcc gtgccttgca gtcctacata caaggcaaga cctaccagc acacgcattc
480
ctggcgccct tcctcggggg tatcctggtg tttggagaaa acaataacat caacagccag
540
atcaacatgt acctgttgtc acgcgtcctg tttgcctga gccgcctggc tgtagagaag
600
ggctacatcc ctgaaccag gtgggaccg ttcctgctgc tctactcggt ggtgtggggg
660
ctggtgctgt ggtcttttga gtatcaccga tccacctgc agccctcgct gcagtcctcc
720
atgacctacc tctatgagga cagcaatgta tggcagaca tctcagactt cctcgtctat
780
aacaagagcc gtcctccaa ttaatgcagc cctgaggtgt ctggctgtgg ctcaagattt
840
ggcccatgc agacctccc aaaggatact gccttctcaa gatcataggc ctcagactcc
900
aactggtgtt atcccagggt tccgtttgct gaagtaaaaa cactgatttt aaaatcccag
960
tggttacctt tgtatggtgg cacaagtggc cgaatcaggc tgaggaatct acggcttggg
1020
tccagctgtg cagctgactt ctgtgagact ggggccagcc acactactct ctaggcctca
1080
ggggtcaagg agctcagagg agggccctga ggtctcttcc cggtgggtat gttcattctt
1140
caactgttct tatgtcacag agggctcctt gctgggtggc agtgggttgt aaatactttt
1200

```


taaaaaaacac taagttcctt atctcagatg ctgttctact ggagaagttc tagattccca
 1260
 ctgtccaata gaaacacgtg agccatatat gtaattaaaa tgtttctagt agctgcatta
 1320
 caaaaaagaa gcctgggcac tgtggctcac tcctgtaatc tcagaacttt gggaggctga
 1380
 ggcaggtgga tcacttgagc tcaggagctt gagaccagcc tgggcaacat ggtgaaaccc
 1440
 agtttctaca aaaaaaaaaa
 1459

<210> 5892

<211> 212

<212> PRT

<213> Homo sapiens

<400> 5892

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Ala | Pro | Pro | Gln | Leu | Arg | Ala | Leu | Leu | Val | Val | Val | Asn | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Leu | Arg | Lys | Arg | Arg | Tyr | His | Ala | Ala | Leu | Ala | Val | Leu | Lys | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Phe | Arg | Asn | Gly | Ala | Val | Tyr | Gly | Ala | Lys | Ile | Arg | Ala | Pro | His | Ala |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Val | Met | Thr | Phe | Leu | Phe | Arg | Asn | Gly | Ser | Leu | Gln | Glu | Lys | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Trp | Ala | Ile | Leu | Gln | Ala | Thr | Tyr | Ile | His | Ser | Trp | Asn | Leu | Ala | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Phe | Val | Phe | Thr | Tyr | Lys | Gly | Leu | Arg | Ala | Leu | Gln | Ser | Tyr | Ile | Gln |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gly | Lys | Thr | Tyr | Pro | Ala | His | Ala | Phe | Leu | Ala | Ala | Phe | Leu | Gly | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ile | Leu | Val | Phe | Gly | Glu | Asn | Asn | Ile | Asn | Ser | Gln | Ile | Asn | Met | |
| | 115 | | | | | 120 | | | | | 125 | | | | |
| Tyr | Leu | Leu | Ser | Arg | Val | Leu | Phe | Ala | Leu | Ser | Arg | Leu | Ala | Val | Glu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Lys | Gly | Tyr | Ile | Pro | Glu | Pro | Arg | Trp | Asp | Pro | Phe | Pro | Leu | Leu | Thr |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ala | Val | Val | Trp | Gly | Leu | Val | Leu | Trp | Leu | Phe | Glu | Tyr | His | Arg | Ser |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Thr | Leu | Gln | Pro | Ser | Leu | Gln | Ser | Ser | Met | Thr | Tyr | Leu | Tyr | Glu | Asp |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Ser | Asn | Val | Trp | His | Asp | Ile | Ser | Asp | Phe | Leu | Val | Tyr | Asn | Lys | Ser |
| | 195 | | | | | | 200 | | | | | | 205 | | |
| Arg | Pro | Ser | Asn | | | | | | | | | | | | |
| | 210 | | | | | | | | | | | | | | |

<210> 5893

<211> 1389

<212> DNA

<213> Homo sapiens

<400> 5893

nnggatccga tgccggcagc gtccctggggc ccccgtagcg gggctggacc atgagcctgc
 60

tggacggcct cgcttcctcg ccgcgggctc cgctgcagtc cagcaaggcc aggatgaaaa
120
agctcccgaa gaagagccag aatgagaagt accggctgaa gtacctgcgg ctgcgcaaag
180
cggccaaggc cacggtgttt gaaaatgctg ctatttgtga tgaaattgct cgtcttgagg
240
aaaaatttct taaagcaaaa gaagaaagaa ggtacttgct aaagaagctc ctccagcttc
300
aggctctaac tgaaggggaa gtacaggctg cagctccttc ccacagttcc agtttgcccc
360
tgacttatgg tgtggccagc tctgtgggaa ctatacaggg agctgggcct atttcagggc
420
ccagcactgg ggctgaggaa ccatttgga agaaaactaa gaaggagaaa aaagaaaaag
480
gcaaagagaa caacaaactg gaagatcatc accgaccgac ctggctttca tgatgagagt
540
gccatctacc ccgtgggcta ttgcagtact cgaatatatg ccagcatgaa gtgcccagac
600
cagaagtgtc tatatacctg tcagatcaag gatgggtggg tgcagcctca gtttgaaatt
660
gttctgaag atgaccccc gaatgccatt gtcagctctt ctgcagatgc ttgtcatgca
720
gaactgctca ggactataag cactactatg gggaaactaa tgcctaacct gcttcagct
780
ggagctgact tttttggatt ttctcatcca gccatccaca acctgatcca gagctgtcca
840
ggagctcgaa aatgcatcaa ttaccagtgg gtgaaatttg atgtgtgcaa acctggagat
900
gggcagctac ctgaggggct gccggagaat gatgcagcta tgagctttga agcctttcag
960
agacagatct ttgatgaaga tcagaatgat ccccttctgc caggatcctt ggacctccca
1020
gagcttcagc ctgcagcctt tgtgtcttct taccagccca tgtacctgac acatgaaccc
1080
ttggtagata ctcacctgca gcacttgaag tctccatcac agggtagccc aattcagtct
1140
tcagattgaa caagaaggga tcagatgcca catcgttttt gtcgtgatta atttaactta
1200
aactaaaatt ttgggtatat gaaagaaggc agcaattcag aagtaaagaa gatactaacg
1260
tatttcatca tggaagggtc tgtggtgatg gttttccctg ggaaaacctt cagctgcttt
1320
atttttagta ataaatttct cttgtcaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1380
aaaaaaaaa
1389

<210> 5894

<211> 260

<212> PRT

<213> Homo sapiens

<400> 5894

Met Val Trp Pro Ala Leu Trp Glu Leu Tyr Arg Glu Leu Gly Leu Phe

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | 5 | | 10 | | 15 | | | | | | | | | |
| Gln | Gly | Pro | Ala | Leu | Gly | Leu | Arg | Asn | His | Leu | Gly | Arg | Lys | Leu | Arg |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Arg | Arg | Lys | Lys | Lys | Lys | Ala | Lys | Arg | Thr | Thr | Asn | Trp | Lys | Ile | Ile |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Thr | Asp | Arg | Pro | Gly | Phe | His | Asp | Glu | Ser | Ala | Ile | Tyr | Pro | Val | Gly |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Tyr | Cys | Ser | Thr | Arg | Ile | Tyr | Ala | Ser | Met | Lys | Cys | Pro | Asp | Gln | Lys |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Cys | Leu | Tyr | Thr | Cys | Gln | Ile | Lys | Asp | Gly | Gly | Val | Gln | Pro | Gln | Phe |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Glu | Ile | Val | Pro | Glu | Asp | Asp | Pro | Gln | Asn | Ala | Ile | Val | Ser | Ser | Ser |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ala | Asp | Ala | Cys | His | Ala | Glu | Leu | Leu | Arg | Thr | Ile | Ser | Thr | Thr | Met |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gly | Lys | Leu | Met | Pro | Asn | Leu | Leu | Pro | Ala | Gly | Ala | Asp | Phe | Phe | Gly |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Phe | Ser | His | Pro | Ala | Ile | His | Asn | Leu | Ile | Gln | Ser | Cys | Pro | Gly | Ala |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Arg | Lys | Cys | Ile | Asn | Tyr | Gln | Trp | Val | Lys | Phe | Asp | Val | Cys | Lys | Pro |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Gly | Asp | Gly | Gln | Leu | Pro | Glu | Gly | Leu | Pro | Glu | Asn | Asp | Ala | Ala | Met |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Ser | Phe | Glu | Ala | Phe | Gln | Arg | Gln | Ile | Phe | Asp | Glu | Asp | Gln | Asn | Asp |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Pro | Leu | Leu | Pro | Gly | Ser | Leu | Asp | Leu | Pro | Glu | Leu | Gln | Pro | Ala | Ala |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Phe | Val | Ser | Ser | Tyr | Gln | Pro | Met | Tyr | Leu | Thr | His | Glu | Pro | Leu | Val |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Asp | Thr | His | Leu | Gln | His | Leu | Lys | Ser | Pro | Ser | Gln | Gly | Ser | Pro | Ile |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Gln | Ser | Ser | Asp | | | | | | | | | | | | |
| | | | 260 | | | | | | | | | | | | |

<210> 5895

<211> 2748

<212> DNA

<213> Homo sapiens

<400> 5895

gcaacaataa gaaagatgct gagcttctgg tggcctttgn gtctaattct ggccacacag

60

agaatcagtc ggcctattgt caacctcttt gtttcccggg accttggtgg cagttctgca

120

gccacagagg cagtggcgat tttgacagcc acataccctg tgggtcacat gccatacggc

180

tggttgacgg aaatccgtgc tgtgtatcct gctttcgaca agaataaccc cagcaacaaa

240

ctggtgagca cgagcaacac agtcacggca gccacatca agaagttcac cttcgtctgc

300

atggctctgt cactcacgct ctgtttcgtg atgttttgga caccacacgt gtctgagaaa

360

atcttgatag acatcatcgg agtggacttt gcctttgcag aactctgtgt tgttcctttg

420

~~cggatcttct ccttcttccc~~ agttccagtc acagtgaggg cgcattctcac cgggtggctg
480
atgacactga agaaaacctt cgtccttgcc cccagctctg tgctgcggat catcgtcctc
540
atgccagcc tcgtggtcct accctacctg ggggtgcacg gtgcgacctt gggcgtgggc
600
tcctccttg cgggccttctt gggagaatcc accatggctg ccatcgtctg gtgctatgtc
660
taccggaagc agaaaaagaa gatggagaat gagtcggcca cggaggggga agactctgcc
720
atgacagaca tgccctccgac agaggaggtg acagacatcg tggaaatgag agaggagaat
780
gaataaggca cgggacgcca tgggcactgc agggacagtc agtcaggatg acacttcggc
840
atcatctctt ccctctccca tcgtattttg ttcctttttt tttgttttgt tttggtaatg
900
aaagaggcct tgatttaaag gtttcgtgtc aattctctag catactgggt atgctcacac
960
tgacgggggg acctagtga tggctcttac tgttgctatg taaaaacaaa cgaaacaact
1020
gacttcatac cctgcctca cgaaaaccca aaagacacag ctgcctcacg gttgacgttg
1080
tgtcctcctc ccctggacaa tctcctcttg gaaccaaagg actgcagctg tgccatcgcg
1140
cctcggtcac cctgcacagc aggccacaga ctctcctgtc ccccttcacg gctcttaaga
1200
atcaacaggt taaaactcgg ctccctttga tttgcttccc agtcacatgg cgtacaaaag
1260
agatggagcc cgggtggcct cttaaatttc ccttcgcgca cggagttcga aaccatctac
1320
tccacacatg caggaggcgg gtggcacgct gcagcccgga gtccccgttc aactgagga
1380
acggagacct gtgaccacag caggctgaca gatggacaga atctcccgtg gaaaggtttg
1440
gtttgaaatg ccccgggggc agcaaactga catggttgaa tgatagcatt tcaactctgcg
1500
ttctcctaga tctgagcaag ctgtcagttc tcacccccac cgtgtatata catgagctaa
1560
cttttttaaa ttgtcacaaa agcgcattct cagattccag accctgccgc atgacttttc
1620
ctgaaggctt gcttttccct cgcctttcct gaaggctgca ttagagcgag tcacatggag
1680
catcctaact ttgcatttta gtttttacag tgaactgaag ctttaagtaa gtctcatcca
1740
gcattctaat gccaggttgc tgtagggtaa cttttgaagt agatatatta cctggttctg
1800
ctatccttag tcataactct gcggtacagg taattgagaa tgtactacgg tacttcctc
1860
ccacaccata cgataaagca agacatttta taacgatacc agagtcacta tgtggtcctc
1920
cctgaaataa cgcattcgaa atccatgcag tgcagtatat ttttctaagt tttggaaagc
1980
agggtttttc ctttaaaaaa attatagaca cggttcacta aattgattta gtcagaattc
2040

ctagactgaa agaacctaaa caaaaaaata ttttaaagat ataaatatat gctgtatatg
 2100
 ttatgtaatt tatttttaggc tataatacat ttcctatttt cgcattttca ataaaatgtc
 2160
 tctaatacaa tacggtgatt gcttgtgtgc tcaacatacc tgcagttgaa acgtattgta
 2220
 tcaatgaaca ttgtacctta ttggcagcag ttttataaag tccgtcattt gcatttgaat
 2280
 gtaaggctca gtaaatagaca gaactatttt tcattatggg taactgggga ataaatgggt
 2340
 cactggagta ggaatagaag tgcaagctgg aaaggcaaaa atgagaaaga aaaaggcagg
 2400
 ccctttgtgt ctaccgtttt cagtgtgtgt tgatcatatt gttcctcaca gcaaaaaaga
 2460
 atgcaagggc ataatgttag ctgtgaacat gccaggggtg cattcacatt cctgggtacc
 2520
 cagtgtgat ggggtgtgcc cacgtgggga catgtccttg gcgtgcttcc tcagagtggc
 2580
 ttttctcca ttaatacata tatgagtact gaagaattaa tttgcatagc tgctttgcag
 2640
 tggtttcaga ggcagatctg agaagattaa aaaaaaatct caatgtatca gcttttttta
 2700
 aaggacatta ctagaaaatt aaacagtatt ttttaacaaa aaaaaaaa
 2748

<210> 5896
 <211> 261
 <212> PRT
 <213> Homo sapiens

<400> 5896
 Ala Thr Ile Arg Lys Met Leu Ser Phe Trp Trp Pro Leu Xaa Leu Ile
 1 5 10 15
 Leu Ala Thr Gln Arg Ile Ser Arg Pro Ile Val Asn Leu Phe Val Ser
 20 25 30
 Arg Asp Leu Gly Gly Ser Ser Ala Ala Thr Glu Ala Val Ala Ile Leu
 35 40 45
 Thr Ala Thr Tyr Pro Val Gly His Met Pro Tyr Gly Trp Leu Thr Glu
 50 55 60
 Ile Arg Ala Val Tyr Pro Ala Phe Asp Lys Asn Asn Pro Ser Asn Lys
 65 70 75 80
 Leu Val Ser Thr Ser Asn Thr Val Thr Ala Ala His Ile Lys Lys Phe
 85 90 95
 Thr Phe Val Cys Met Ala Leu Ser Leu Thr Leu Cys Phe Val Met Phe
 100 105 110
 Trp Thr Pro Asn Val Ser Glu Lys Ile Leu Ile Asp Ile Ile Gly Val
 115 120 125
 Asp Phe Ala Phe Ala Glu Leu Cys Val Val Pro Leu Arg Ile Phe Ser
 130 135 140
 Phe Phe Pro Val Pro Val Thr Val Arg Ala His Leu Thr Gly Trp Leu
 145 150 155 160
 Met Thr Leu Lys Lys Thr Phe Val Leu Ala Pro Ser Ser Val Leu Arg
 165 170 175
 Ile Ile Val Leu Ile Ala Ser Leu Val Val Leu Pro Tyr Leu Gly Val

```
<210> 5897
<211> 1930
<212> DNA
<213> Homo sapiens
```

```

<400> 5897
ngcgccgata agaggcagca gttcggaagc cggttcctga gagatccggc ggcggtcttc
60
caccacaatg cctggtaatc actctgcccc ttcgcccggc ctgtcgctga cctctgtctc
120
cgccgcctcg gagcattccg aaaagcccct gaccgccggc cacgagtcaa gctgccctac
180
ccggccacga gtcaagctgc cctacccgag gcactctcca aggggagaga aactcctagg
240
ccagcgactc accctgcccc cagccaggac gtgaagcccc taagctgccc gtttgatttt
300
ctcagggaca atgtggagtg gtcggaagag caagccgcgg cggcggagag aaaagtcag
360
gagaacagta tccagcgggt gtgccaggag aaacaagttg attatgagat caatgccac
420
aaatactgga atgacttcta caaaatccac gaaaatgggt ttttcaagga tagacattgg
480
ctttttaccg aattccctga gctggcacct agccaaaatc aaaatcattt gaaggactgg
540
ttcttggaga acaagagtga agtatgtgaa tgtagaaaaca atgaggatgg acctggttta
600
ataatggaag aacagcacia gtgttcttcg aagagccttg aacataaaac acagacacct
660
cctgtggagg agaatgtaac tcagaaaatt agtgacctgg aaatttgtgc tgatgagttt
720
cctggatcct cagccaccta ccgaatactg gaggttggt gtggtgtggg aaacacagtc
780
tttccaattt taaaaacgaa caatgacca ggactctttg tttattgctg tgatttttct
840
tccacagcta tagaactggc ccagacaaat tcagaatatg atccttctcg gtgttttgcc
900
tttgttcacg acctgtgtga tgaagagaag agttaccag tgcccaaggg cagtcttgat
960
attatcattc tcatatttgt tctttcagca attgttccag acaagatgca gaaggctatc
1020
aacaggctga gcaggcttct gaaacctggg gggatggtac ttctgcgaga ttacggccgc
1080

```

tatgacatgg ctcagcttcg gtttaaaaaa ggtcagtgtc tatctggaaa tttctacgtg
 1140
 agaggtgatg gaaccagagt ttactttctc acacaagagg aactggacac gcttttcacc
 1200
 actgctggac tggaaaaagt tcagaacctg gtggatcgcc gactgcaggt gaaccgagga
 1260
 aagcaactga caatgtaccg ggtttggatt cagtgcaaact actgcaagcc ctttctgtcc
 1320
 agcaccagct gagaggcacc tgctgccaac acgatgcaag cccatttgtgt ttccgggctt
 1380
 ttttaaaaaa aaaattgtag cactgggcgt ggtgcatgcc tgtaatccca gccactcagg
 1440
 aggctgagggc ggggaggatc cattgagccc agcagtccaa cctgggcaaa atagtgagag
 1500
 accctgtatc tgaaagtaat aataaaaaata aaagaatata aatgaggtct cgttgatgtt
 1560
 ggacaattca agaattcaga cttgaacctt aaacctagga aaagttactt tgtatcagga
 1620
 ttctaacaat tatgcttcat atttgtgaag tccttttaaaa cataattttc tcaagttctt
 1680
 tctttgagat ctcaatctgt cttagcattt tgtaactaat aactgaaatt ttattcaaag
 1740
 gaattgtaaa ccttaaacca ccaatttatt tccatgtgaa aaagtgttat atatgacaag
 1800
 tgttttttga ttgtaattgc gttaaactct ttgagagtgt aaatgccggc aaagtttcgc
 1860
 tcttgtcacc taggctggag tgcagtgggt cgatctcggc tcaactgcaac ctctgcctcc
 1920
 agggntcaag
 1930

<210> 5898

<211> 242

<212> PRT

<213> Homo sapiens

<400> 5898

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Glu | Gln | His | Lys | Cys | Ser | Ser | Lys | Ser | Leu | Glu | His | Lys | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Thr | Pro | Pro | Val | Glu | Glu | Asn | Val | Thr | Gln | Lys | Ile | Ser | Asp | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Ile | Cys | Ala | Asp | Glu | Phe | Pro | Gly | Ser | Ser | Ala | Thr | Tyr | Arg | Ile |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Glu | Val | Gly | Cys | Gly | Val | Gly | Asn | Thr | Val | Phe | Pro | Ile | Leu | Gln |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Thr | Asn | Asn | Asp | Pro | Gly | Leu | Phe | Val | Tyr | Cys | Cys | Asp | Phe | Ser | Ser |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Thr | Ala | Ile | Glu | Leu | Val | Gln | Thr | Asn | Ser | Glu | Tyr | Asp | Pro | Ser | Arg |
| | | | | 85 | | | | 90 | | | | | | 95 | |
| Cys | Phe | Ala | Phe | Val | His | Asp | Leu | Cys | Asp | Glu | Glu | Lys | Ser | Tyr | Pro |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Val | Pro | Lys | Gly | Ser | Leu | Asp | Ile | Ile | Ile | Leu | Ile | Phe | Val | Leu | Ser |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ala | Ile | Val | Pro | Asp | Lys | Met | Gln | Lys | Ala | Ile | Asn | Arg | Leu | Ser | Arg |

| | | |
|---|-----|-----|
| 130 | 135 | 140 |
| Leu Leu Lys Pro Gly Gly Met Val Leu Leu Arg Asp Tyr Gly Arg Tyr | | |
| 145 | 150 | 155 |
| Asp Met Ala Gln Leu Arg Phe Lys Lys Gly Gln Cys Leu Ser Gly Asn | | 160 |
| | 165 | 170 |
| Phe Tyr Val Arg Gly Asp Gly Thr Arg Val Tyr Phe Phe Thr Gln Glu | | 175 |
| | 180 | 185 |
| Glu Leu Asp Thr Leu Phe Thr Thr Ala Gly Leu Glu Lys Val Gln Asn | | 190 |
| | 195 | 200 |
| Leu Val Asp Arg Arg Leu Gln Val Asn Arg Gly Lys Gln Leu Thr Met | | 205 |
| | 210 | 215 |
| Tyr Arg Val Trp Ile Gln Cys Lys Tyr Cys Lys Pro Leu Leu Ser Ser | | 220 |
| 225 | 230 | 235 |
| Thr Ser | | 240 |

<210> 5899

<211> 1589

<212> DNA

<213> Homo sapiens

<400> 5899

```

nngctagcag cccgcacgtt ggacacaccc tgcaatgaga tgaacaccga caccttcctc
60
gaggagatta acaaagttgg aaaggaactg gggatcatcc caaccatcat cggggatgag
120
gaactgaaga cgagaggatt tggaggaatc tatgggggttg gcaaagccgc cctgcatccc
180
ccagccctgg ccgtcctcag ccacacccca gatggagcca cgcagacat cgctgggtg
240
ggcaaaggca tcgtctatga cactggaggc ctcagcatca aagggaagac taccatgccg
300
gggatgaagc gagactgcgg ggggtgctgcg gccgtcctgg gggccttcag agccgcaatc
360
aagcagggtt tcaaagacaa cctccacgct gtgttctgct tggctgagaa ctcggtgggg
420
cccaatgcga caaggccaga tgacatccac ctgctgtact cagggaagac ggtggaaatc
480
aacaacacgg atgccgaggg caggctgggtg ctggcagatg gcgtgtccta tgcttgcaag
540
gacctggggg ccgacatcat cctggacatg gccaccctga ccggggctca gggcattgcc
600
acagggaagt accacgccgc ggtgctcacc aacagcgtg agtgggaggc cgctgtgtg
660
aaggcgggca ggaagtgtgg ggacctgggtg caccgctgg tctactgccc cgagctgcac
720
ttcagcgagt tcacctcagc tgtggcggac atgaagaact cagtggcgga ccgagacaac
780
agccccagct cctgtgctgg cctcttcacg gctcacaca tcggcttcga ctggcccgga
840
gtctgggtcc acctggacat tgctgcaccg gtgcatgctg gtgagcgagc cacaggcttc
900
gggtgtggccc tctgtgtggc gctcttcggc cgtgctctg aggacctct gctgaacctg
960

```


gtgtcccccac tgggctgtga ggtggatgtc gaggaggggg acctggggag ggactccaag
 1020
 agacgcaggc ttgtgtgagc ctctgcctc ggccctgaca aacggggatc ttttacctca
 1080
 ctttgactg attaatTTta agcaattgaa agattgccct tcatatgggt tttggtttgt
 1140
 ctttctggtc gtcagcgtgg tgggtggaaac agctgaagtt ttaggagaca gcttaggggt
 1200
 tggtgcgggc cacggggagg ggaccgggaa gcgctggggc ttgtttctgt ttgttactta
 1260
 caggactgag acatcttctg taaactgcta cccctggggc cttctgcacc ccgggggtgag
 1320
 gcctcctgcc tgcttgggtgc cctgtcccag cccaggtcc tgtgcagggc acctgcgtgg
 1380
 ctgacagcca ggctcttact ccagccgggg ctgccagcgc atccagccag ccagccctg
 1440
 tgaaagatgg agctgacttg ctgcagggga cctgatttat agggcaagag aagtcacact
 1500
 ccggcctctc agaattcact tgaggttcaa ttaaatacag tcacaccgcc ccctcaaaaa
 1560
 aaaaaaaaaa aaaaaaaaca aaaaaaaaaa
 1589

<210> 5900

<211> 345

<212> PRT

<213> Homo sapiens

<400> 5900

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Leu | Ala | Ala | Arg | Ile | Val | Asp | Thr | Pro | Cys | Asn | Glu | Met | Asn | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asp | Thr | Phe | Leu | Glu | Glu | Ile | Asn | Lys | Val | Gly | Lys | Glu | Leu | Gly | Ile |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ile | Pro | Thr | Ile | Ile | Arg | Asp | Glu | Glu | Leu | Lys | Thr | Arg | Gly | Phe | Gly |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Gly | Ile | Tyr | Gly | Val | Gly | Lys | Ala | Ala | Leu | His | Pro | Pro | Ala | Leu | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Leu | Ser | His | Thr | Pro | Asp | Gly | Ala | Thr | Gln | Thr | Ile | Ala | Trp | Val |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Gly | Lys | Gly | Ile | Val | Tyr | Asp | Thr | Gly | Gly | Leu | Ser | Ile | Lys | Gly | Lys |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Thr | Thr | Met | Pro | Gly | Met | Lys | Arg | Asp | Cys | Gly | Gly | Ala | Ala | Ala | Val |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Gly | Ala | Phe | Arg | Ala | Ala | Ile | Lys | Gln | Gly | Phe | Lys | Asp | Asn | Leu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| His | Ala | Val | Phe | Cys | Leu | Ala | Glu | Asn | Ser | Val | Gly | Pro | Asn | Ala | Thr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Arg | Pro | Asp | Asp | Ile | His | Leu | Leu | Tyr | Ser | Gly | Lys | Thr | Val | Glu | Ile |
| 145 | | | | 150 | | | | | | 155 | | | | 160 | |
| Asn | Asn | Thr | Asp | Ala | Glu | Gly | Arg | Leu | Val | Leu | Ala | Asp | Gly | Val | Ser |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Tyr | Ala | Cys | Lys | Asp | Leu | Gly | Ala | Asp | Ile | Ile | Leu | Asp | Met | Ala | Thr |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Leu | Thr | Gly | Ala | Gln | Gly | Ile | Ala | Thr | Gly | Lys | Tyr | His | Ala | Ala | Val |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 195 | | 200 | | 205 | | | | | | | | | | |
| Leu | Thr | Asn | Ser | Ala | Glu | Trp | Glu | Ala | Ala | Cys | Val | Lys | Ala | Gly | Arg |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Lys | Cys | Gly | Asp | Leu | Val | His | Pro | Leu | Val | Tyr | Cys | Pro | Glu | Leu | His |
| 225 | | | | 230 | | | | | | 235 | | | | 240 | |
| Phe | Ser | Glu | Phe | Thr | Ser | Ala | Val | Ala | Asp | Met | Lys | Asn | Ser | Val | Ala |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Asp | Arg | Asp | Asn | Ser | Pro | Ser | Ser | Cys | Ala | Gly | Leu | Phe | Ile | Ala | Ser |
| | | 260 | | | | | | 265 | | | | | 270 | | |
| His | Ile | Gly | Phe | Asp | Trp | Pro | Gly | Val | Trp | Val | His | Leu | Asp | Ile | Ala |
| | 275 | | | | | | 280 | | | | | 285 | | | |
| Ala | Pro | Val | His | Ala | Gly | Glu | Arg | Ala | Thr | Gly | Phe | Gly | Val | Ala | Leu |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Leu | Leu | Ala | Leu | Phe | Gly | Arg | Ala | Ser | Glu | Asp | Pro | Leu | Leu | Asn | Leu |
| 305 | | | | 310 | | | | | | 315 | | | | 320 | |
| Val | Ser | Pro | Leu | Gly | Cys | Glu | Val | Asp | Val | Glu | Glu | Gly | Asp | Leu | Gly |
| | | | 325 | | | | | 330 | | | | | | 335 | |
| Arg | Asp | Ser | Lys | Arg | Arg | Arg | Leu | Val | | | | | | | |
| | | 340 | | | | | 345 | | | | | | | | |

<210> 5901

<211> 984

<212> DNA

<213> Homo sapiens

<400> 5901

```

nccggccgccg cagccatgac cgtggagttc gaggagtgcg tcaaggactc cccgcgcttc
60
agggcgacca ttgacgaggt ggagacggac gtggtggaga ttgaggccaa actggacaag
120
ctggtgaagc tgtgcagtgg catggtggaa gccggtaagg cctacgtcag caccagcagg
180
cttttcgtga ggggcgtccg cgacctgtcc cagcagtgcc agggcgacac cgtcatctcg
240
gaatgtctgc agaggttcgc tgacagccta caggaggtgg tgaactacca catgatcctg
300
tttgaccagg ccagagagtc cgtgcggcag cagctccaga gctttgtcaa agaggatgtg
360
cggaagtcca aggagacaaa gaagcagttt gacaagggtgc gggaggacct ggagctgtcc
420
ctggtgagga acgcccaggc cccgaggcac cggccccacg aggtggagga agccaccggg
480
gccctcacc tcaccaggaa gtgcttcgc cacctggcac tggactatgt gctccagatc
540
aatgttctgc aggccaagaa gaagtttgag atcctggact ctatgctgtc cttcatgcac
600
gccagtgcca gcttcttcca gcagggtac agcctcctgc accagctgga cccctacatg
660
aagaagctgg cagccgagct ggaccagctg gtgatcgact ctgcggtgga aaagcgtgag
720
atggagcgaa agcacgccgc catccagcag cggaccctta gggacttctc ctacgatgag
780
tcgaaagtgg agtttgacgt ggacgcgccc agtggggtgg tgatggaggg ctacctcttc
840

```

aagagggcca gcaacncttt caagacatgg aaccggcgct gggtctccat tcagaacagc
 900
 cagctgggtct accagaagaa gctcaaggat gccctcaccg tgggtggtgga tgacctccgc
 960
 ctgtgctctg tgaagccgtg tgag
 984

<210> 5902

<211> 328

<212> PRT

<213> Homo sapiens

<400> 5902

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Ala | Ala | Ala | Met | Thr | Val | Glu | Phe | Glu | Glu | Cys | Val | Lys | Asp |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Pro | Arg | Phe | Arg | Ala | Thr | Ile | Asp | Glu | Val | Glu | Thr | Asp | Val | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Ile | Glu | Ala | Lys | Leu | Asp | Lys | Leu | Val | Lys | Leu | Cys | Ser | Gly | Met |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Val | Glu | Ala | Gly | Lys | Ala | Tyr | Val | Ser | Thr | Ser | Arg | Leu | Phe | Val | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Val | Arg | Asp | Leu | Ser | Gln | Gln | Cys | Gln | Gly | Asp | Thr | Val | Ile | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Glu | Cys | Leu | Gln | Arg | Phe | Ala | Asp | Ser | Leu | Gln | Glu | Val | Val | Asn | Tyr |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| His | Met | Ile | Leu | Phe | Asp | Gln | Ala | Gln | Arg | Ser | Val | Arg | Gln | Gln | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gln | Ser | Phe | Val | Lys | Glu | Asp | Val | Arg | Lys | Phe | Lys | Glu | Thr | Lys | Lys |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gln | Phe | Asp | Lys | Val | Arg | Glu | Asp | Leu | Glu | Leu | Ser | Leu | Val | Arg | Asn |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ala | Gln | Ala | Pro | Arg | His | Arg | Pro | His | Glu | Val | Glu | Glu | Ala | Thr | Gly |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ala | Leu | Thr | Leu | Thr | Arg | Lys | Cys | Phe | Arg | His | Leu | Ala | Leu | Asp | Tyr |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Val | Leu | Gln | Ile | Asn | Val | Leu | Gln | Ala | Lys | Lys | Lys | Phe | Glu | Ile | Leu |
| | | 180 | | | | | 185 | | | | | | 190 | | |
| Asp | Ser | Met | Leu | Ser | Phe | Met | His | Ala | Gln | Ser | Ser | Phe | Phe | Gln | Gln |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Gly | Tyr | Ser | Leu | Leu | His | Gln | Leu | Asp | Pro | Tyr | Met | Lys | Lys | Leu | Ala |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Glu | Leu | Asp | Gln | Leu | Val | Ile | Asp | Ser | Ala | Val | Glu | Lys | Arg | Glu |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Met | Glu | Arg | Lys | His | Ala | Ala | Ile | Gln | Gln | Arg | Thr | Leu | Arg | Asp | Phe |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Ser | Tyr | Asp | Glu | Ser | Lys | Val | Glu | Phe | Asp | Val | Asp | Ala | Pro | Ser | Gly |
| | | 260 | | | | | | 265 | | | | | 270 | | |
| Val | Val | Met | Glu | Gly | Tyr | Leu | Phe | Lys | Arg | Ala | Ser | Asn | Xaa | Phe | Lys |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Thr | Trp | Asn | Arg | Arg | Trp | Phe | Ser | Ile | Gln | Asn | Ser | Gln | Leu | Val | Tyr |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Gln | Lys | Lys | Leu | Lys | Asp | Ala | Leu | Thr | Val | Val | Val | Asp | Asp | Leu | Arg |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Leu | Cys | Ser | Val | Lys | Pro | Cys | Glu | | | | | | | | |

325

<210> 5903

<211> 3734

<212> DNA

<213> Homo sapiens

<400> 5903

ctctgggctc caaggtcacg ggaggccagc ctcccttctt cccagctgcc tcctcctggc
60
aggggacctc tggcacacgc tccatgcccg cctgcccctc cagatctgtc cccaagccaa
120
gcaggggacc tcacttaatc ccaattatgt aatctgcaat ttaaacagtt ggcccatgag
180
gaggcgcttg gagccacgcc caggagtggg ggcaaaagga cccagctggg tcagggctga
240
caaactaggc ttggcctctt gcctatagtg gccaccactc ctcaagcccc agccagcacg
300
atgagcggca gagtcggcga tctgagcccc aggcagaagg aggcattggc caagtctcgg
360
gagaatgtcc aggatgtgct gccggccctg ccgaatccag atgactatct tctcctgcgt
420
tggctccgag ccagaagctt cgacctgcag aagtcggagg ccatgctccg gaagcatgtg
480
gagttccgaa agcaaaagga cattgacaac atcattagct ggcagcctcc agaggtgatc
540
caacagtatc tgtcaggggg tatgtgtggc tatgacctgg atggctgccc agtctggtac
600
gacataattg gacctctgga tgccaagggc ctctgctgtg cagcctccaa gcaggatatg
660
atccggaaag gcatcaaagt ctgtgagctg ctgttgcatg agtgtgagct gcagactcag
720
aagctgggca ggaagatcga gatggcgctg atgggtgttg acatggaggg gctgagcctg
780
aaacacctgt ggaagccagc tgtggaggtc taccagcagt tttttagcat cctggaagca
840
aattatcctg agacctgaa gaatttaatt gttattcgag ccccaaaact gttccccatg
900
gccttcaact tggcgaagtc gttcatgagt gaggacactc gtaagaagat catggctcctg
960
ggagcaaatt ggaaggaggc tttactgaaa catatcagcc ctgaccaggc gcctgtggag
1020
tatgggggca ccatgactga ccctgatgga aaccccaagt gcaaatacaa gatcaactac
1080
gggggtgaca tccccaggaa gtattatgtg cgagaccagg tgaaacagca gtatgaacac
1140
agcgtgcaga tttcccgctg ctctcccaa caagtggagt atgagatcct cttccctggc
1200
tgtgtcctca ggtggcagtt tctgtgagat ggagcggatg ttgggttttg gattttcctg
1260
aagaccaaga tgggagagag gcagcgggca ggggagatga cagaggtgct gcccaaccag
1320
aggtacaact cccacctggc ccctgaagat gggaccctca cctgcagtga tcctggcatc
1380

tatgtcctgc ggtttgacaa cacctacagc ttcattcatg ccaagaaggt caatttcact
1440
gtggaggtcc tgcttccaga caaagcctca gaagagaaga tgaaacagct gggggcaggc
1500
accccgaaat aacaccttct cctatagcag gcctggcccc ctcagtgtct ccctgtcaat
1560
ttctaccctt tgtagcagtc attttcgcac aaccctgaag cccaaagaaa ctgggctgga
1620
ggacagacct caggagcttt catttcagtt aggcagagga agagcgactg cagtgggtct
1680
ccgtgtctat caaataccta aggagtcccc aggagctggc tggccatcgt gataggatct
1740
gtctgtcctg taaactgtgc caacttcacc tgtccagga cagcgaagct ggggggtggc
1800
gggggcatgt accacagggg ggcagcaggg aaaaaatta gaaaagggtg aaagattggg
1860
acttaacact tcaggaagt cagctgccgg ggagaaactt gtcctaaat gaacacataa
1920
gtttagatcg caatgaggag tagcagggtg gctgggtgct agagttacgg tggggatcag
1980
aaactcttcc aaacatttta gactgagggc tggggtagct tttggctttt ccaggtctc
2040
aggaggtggc ctgagtcagc acacatcttc ccactcggta gacaggctgg cctctccctc
2100
actttgagac tttggcaact cctgggccac acggcctgcc tctttgatta ctaatgattg
2160
tcagtgactc agagcttctt gggacttcgg gtaccacccc gctgttctcc atgcaaaca
2220
agcgccaggg aatgaccca cagggatcgc agctgcaggg agggccaggg aggttggggg
2280
tgggagtga tgcataaagc agatcgtcca gtgccctttt cagtgtctacc ggcctctcac
2340
caagcagtc tccatgtgag caaccccgag acaaaaatgc taagtgggat caagagagca
2400
gactcggag aggggtgtttg ccagtctgag tgtccgcgg tgcccgccaa cccgcttct
2460
gactgacctg agcaaggtct tactaagcag tcccatctct gtgggaggca tgcaacgcgt
2520
gcagggagtt caggtgccgg tcggcgtagc caggcctgga gggccccag gcaggaggcc
2580
gcccaaaggc ggggcccggc tctcgcagac taggggctgg gggcgccac agacggcctc
2640
gaaaccacag cccttaccac aatccacga gccccgcaa cgaaccacag gtgctgggct
2700
ttagagaaca tgggaaggcg gccccagacc tggcggaac gcctttccct cagagccagg
2760
ccccggcccc gtctgggaag ctcatcttgc gaagctgagg gagctcaggg caaaggccag
2820
gctagcgcg accggaagg gcccaggctg cacgggcctc tgccagaacg ctcaagacat
2880
cccggcctgg gtttacaacg ctgttaggaa aattaaccaa tgaataaagc aacgttcagt
2940
gcgcagggag tgaaattcaa tgcccaccgc taggctcctc gctgcctctc actcaagagg
3000

cccaaactca gacggcggtca gggacccgga cccagcagcc gtttcacgcc aatagatagg
 3060
 gcgcattgcgc agaaatcctc ctcggtcttc tagcgtgagc tttcccaagg ggccacgccc
 3120
 agcttgccct ctgattggtc cagctggtgg gttgtcttcc gccatctttg atcagggcac
 3180
 taaggatgct cccgacggcc ttcacagtga cggcggagac cctgccccgc cagctgctca
 3240
 gtacgtgccg cgtagcccgt gcgagccaag tgtgagtccg ggcgagcgcc tgcggagcta
 3300
 gcactggggc cagaatgaga gggaggcgga ggagcagcga tcacgtggtt ttagggactg
 3360
 tctaataatt ccacgccagc attgccggtg tttcaggggg tgggaaccgc tgcgttcccc
 3420
 atcaactttt ctcccaccca ccaccctccc caacctacaa gccagctca gcttgaggta
 3480
 actgctgacc ggactgtcct atacagccct acaagacaga ggcgcctagg gctgaaagcg
 3540
 ggggcctccg tagggagcca gcgggggcct caatagttac tcattttctc tacctttgat
 3600
 gaaaataaga gctaattctt aataaggcct accgggtatc acgcaaaaac cctgtgctta
 3660
 ctattatact ttgggttggt gcaaagatta aaggaaataa gccgtgcaaa gcgcttaaaa
 3720
 aaaaaaaaaa aaaa
 3734

<210> 5904

<211> 308

<212> PRT

<213> Homo sapiens

<400> 5904

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Gly | Arg | Val | Gly | Asp | Leu | Ser | Pro | Arg | Gln | Lys | Glu | Ala | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Lys | Phe | Arg | Glu | Asn | Val | Gln | Asp | Val | Leu | Pro | Ala | Leu | Pro | Asn |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Asp | Asp | Tyr | Phe | Leu | Leu | Arg | Trp | Leu | Arg | Ala | Arg | Ser | Phe | Asp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Gln | Lys | Ser | Glu | Ala | Met | Leu | Arg | Lys | His | Val | Glu | Phe | Arg | Lys |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Gln | Lys | Asp | Ile | Asp | Asn | Ile | Ile | Ser | Trp | Gln | Pro | Pro | Glu | Val | Ile |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Gln | Gln | Tyr | Leu | Ser | Gly | Gly | Met | Cys | Gly | Tyr | Asp | Leu | Asp | Gly | Cys |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Pro | Val | Trp | Tyr | Asp | Ile | Ile | Gly | Pro | Leu | Asp | Ala | Lys | Gly | Leu | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Ser | Ala | Ser | Lys | Gln | Asp | Met | Ile | Arg | Lys | Gly | Ile | Lys | Val | Cys |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Glu | Leu | Leu | Leu | His | Glu | Cys | Glu | Leu | Gln | Thr | Gln | Lys | Leu | Gly | Arg |
| | | 130 | | | | 135 | | | | | 140 | | | | |
| Lys | Ile | Glu | Met | Ala | Leu | Met | Val | Phe | Asp | Met | Glu | Gly | Leu | Ser | Leu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Lys | His | Leu | Trp | Lys | Pro | Ala | Val | Glu | Val | Tyr | Gln | Gln | Phe | Phe | Ser |

[illegible]

<210> 5905

<211> 2280

<212> DNA

<213> Homo sapiens

<400> 5905

| | | | | | |
|------------|------------|------------|------------|-------------|------------|
| nngttacttt | aaacttttga | tgttgttcaa | gaacagagta | tatcctgggt | aggatgtggt |
| 60 | | | | | |
| catagctgat | gcatactcaa | aaattttttc | atgaaggcgg | ccagcttctg | aacgtcttca |
| 120 | | | | | |
| attgtgacag | cattatacag | agaggcccg | atgcctccca | cagacacgta | gaatccttga |
| 180 | | | | | |
| gaattatcaa | taatctcata | aattgtttga | gatttgatgg | agctaagctt | ctccatggcc |
| 240 | | | | | |
| gcggcacctc | cattgttttt | aatccactcc | agaaccaagc | ccatgacgta | gatgctgaaa |
| 300 | | | | | |
| catggaggcg | tgttgtacaa | ggagctgttt | ccagcctgca | ccttgatttc | caggaccgag |
| 360 | | | | | |
| gggcactctc | ggagggcaaa | cccagcagg | tcatcacgga | caatcaccac | ggtgacccca |
| 420 | | | | | |
| gcagagccaa | cattcttctg | ggcaccagca | aaaatcacac | caaacttgga | aacatccact |
| 480 | | | | | |
| ggcttggaca | ggaagtttga | ggacatgtca | caaaccagta | ctgctccctt | gacatcgggt |
| 540 | | | | | |
| ataaagtcaa | actccacacc | atgcaccgtc | tcatttgcgc | aataatacac | gtaggaggca |
| 600 | | | | | |
| tctgggttga | ggtttgactt | tatacccgat | gtcaaggag | cagtactggt | ttgtgacatg |
| 660 | | | | | |
| tcctcaaact | tcctgtccaa | gccagtggat | gtttccaagt | ttaggggtgat | ttttgctggt |
| 720 | | | | | |
| gccagaaga | atgttggttc | tgctggggtc | accgtggtga | ttgtccgtga | tgacctgctg |
| 780 | | | | | |
| gggtttgccc | tccgagagtg | cccctcggtc | ctggaataca | aggtgcaggc | tggaaacagc |
| 840 | | | | | |

tccttgtaca acacgcctcc atgtttcagc atctacgtca tgggcttggt tctggagtgg
 900
 attaaaaaca atggagggtgc cgcggccatg gagaagctta gctccatcaa atctctaaca
 960
 atttatgaga ttattgataa ttctcaagga ttctacgttt gtccagtggg gccccaaaat
 1020
 agaagcaaga tgaatattcc attccgcatt ggcaatgcc aaggagatga tgcttttagaa
 1080
 aaaagatttc ttgataaagc tcttgaactc aatatgttgt ccttgaaagg gcataggtct
 1140
 gtgggaggca tccgggcctc tctgtataat gctgtcacia ttgaagacgt tcagaagctg
 1200
 gccgccttca tgaaaaaatt tttggagatg catcagctat gaacacatcc taaccaggat
 1260
 atactctgtt cttgaacaac atacaaagtt taaagtaact tggggatggc tacaaaaagt
 1320
 taacacagta tttttctcaa atgaacatgt ttattgcaga ttcttctttt ttgaaagaac
 1380
 aacagcaaaa catccacaac tctgtaaagc tgggtgggacc taatgtcacc ttaattctga
 1440
 cttgaactgg aagcatttta agaaatcttg ttgcttttct aacaaattcc cgcgtatttt
 1500
 gcctttgctg ctactttttc tagtttagatt tcaaacttgc ctgtggactt aataatgcaa
 1560
 gttgcgatta attatttctg gagtcatggg aacacacagc acagagggta ggggggccct
 1620
 ctaggtgctg aatctacaca tctgtggggg ctcttgggtt cagcggctgt tgattcaagg
 1680
 tcaacattga ccattggagg agtgggttaa gagtgccagg cgaagggcaa actgtagatc
 1740
 gatctttatg ctgttattac aggagaagtg acatacttta tatatgttta tattagcaag
 1800
 gtctgttttt aataccatat actttatatt tctatacatt tatatttcta ataatacagt
 1860
 tatcactgat atatgtagac acttttagaa ttatttaa at ccttgacctt gtgcattata
 1920
 gcattccatt agcaagagtt gtaccccctc ccagtcctc gccttcctct ttttaagctg
 1980
 ttttatgaaa aagacctaga agttcttgat tcattttttac cattctttcc ataggtagaa
 2040
 gagaaagttg attggttggt tgtttttcaa ttatgccatt aaactaaaca tttctgttaa
 2100
 attaccctat cctttgttct ctactgtttt ctttgtaatg tatgactacg agagtgatac
 2160
 tttgtgaaa agtctttccc ctattgttta tctattgtca gtattttatg ttgaatatgt
 2220
 aaagaacatt aaagtcctaa aacatctaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2280

<210> 5906

<211> 215

<212> PRT

<213> Homo sapiens

<400> 5906

Glu Ala Ser Gly Leu Arg Phe Asp Phe Ile Pro Asp Val Lys Gly Ala
 1 5 10 15
 Val Leu Val Cys Asp Met Ser Ser Asn Phe Leu Ser Lys Pro Val Asp
 20 25 30
 Val Ser Lys Phe Arg Val Ile Phe Ala Gly Ala Gln Lys Asn Val Gly
 35 40 45
 Ser Ala Gly Val Thr Val Val Ile Val Arg Asp Asp Leu Leu Gly Phe
 50 55 60
 Ala Leu Arg Glu Cys Pro Ser Val Leu Glu Tyr Lys Val Gln Ala Gly
 65 70 75 80
 Asn Ser Ser Leu Tyr Asn Thr Pro Pro Cys Phe Ser Ile Tyr Val Met
 85 90 95
 Gly Leu Val Leu Glu Trp Ile Lys Asn Asn Gly Gly Ala Ala Met
 100 105 110
 Glu Lys Leu Ser Ser Ile Lys Ser Leu Thr Ile Tyr Glu Ile Ile Asp
 115 120 125
 Asn Ser Gln Gly Phe Tyr Val Cys Pro Val Glu Pro Gln Asn Arg Ser
 130 135 140
 Lys Met Asn Ile Pro Phe Arg Ile Gly Asn Ala Lys Gly Asp Asp Ala
 145 150 155 160
 Leu Glu Lys Arg Phe Leu Asp Lys Ala Leu Glu Leu Asn Met Leu Ser
 165 170 175
 Leu Lys Gly His Arg Ser Val Gly Gly Ile Arg Ala Ser Leu Tyr Asn
 180 185 190
 Ala Val Thr Ile Glu Asp Val Gln Lys Leu Ala Ala Phe Met Lys Lys
 195 200 205
 Phe Leu Glu Met His Gln Leu
 210 215

<210> 5907

<211> 1989

<212> DNA

<213> Homo sapiens

<400> 5907

nnattggcta aataaggtgt tatcagctgc ttgatataga gctgataaaa tcttcagcta
 60
 ggcatacttg aggcttgatt acagaagtga ccgtagtcca cccacacacc tgaaatttat
 120
 ttaagagacc aagctaggct cttcctggcc tttaggaaga ggactggcat ggagaaatat
 180
 gttcctcact agttctccca agccatggca cgtcccaaca aattcctcct ttggttttgc
 240
 tgctttgcct ggctgtgttt tcctattagc cttgggttctc aggcttctgg gggagaagct
 300
 cagattgctg ctagtgtga gttggaatct ggggctatgc cttgggtcctt gctgcagcat
 360
 atagatgaga gagacagagc tggcctcctt cccgcgcttt tcaaagttct atctgttggg
 420
 cgaggtgggt cacctaggct gcagccagac tccagagctt tgcactacat gaagaagctc
 480
 tataagacat atgctaccaa ggaagggatt cctaaatcca atagaagtca cctctacaac
 540

actgttcggc tcttcacccc ctgtacccgg cacaagcagg ctcttggaaga ccaggtaaca
600
ggaatccttc catcagtggg actgctatct aacctggatc gcattactac cgttgaacac
660
ttactcaagt cagtcttgct gtacaatct aacaactcag tttctttttc ctctgctgtc
720
aaatgtgtgt gcaatctaata gataaaggag ccaaagtctt ctagcaggac tctcggcaga
780
gtccatact catttacctt taactcacag tttgaatttg gaaagaaaca caaatggatt
840
cagattgatg tgaccagcct ccttcaacct ttagtggcct ccaacaagag aagtattcac
900
atgtctataa attttacttg catgaaagac cagctggagc atccttcagc acagaatggg
960
ttgtttaaca tgactctggg gtccccctca ctgatcttat atttgaatga cacaagtgtc
1020
caggcttatc acagctggta ttcccttcac tataaaagga ggccttccca gggctctgac
1080
caggagagaa gtctgtctgc ctatcctgtg ggagaagagg ctgctgagga tgggagatct
1140
tcccatcacc gtcaccgcag aggtcaggaa actgtcagtt ctgaattgaa gaagcccttg
1200
ggcccagctt ccttcaatct gagtgaatac ttcagacaat ttcttcttcc ccaaatgag
1260
tgtgagctcc atgacttttag acttagcttt agtcagctga agtgggacaa ctggattgtg
1320
gtccgcaca ggtacaaccc tcgatactgt aaaggggact gtccaagggc agttggacat
1380
cggtatggct ctccagttca caccatggta cagaacatca tctatgagaa gctggactcc
1440
tcagtgccaa gaccgtcatg tgtacctgcc aaatacagcc ccttgagtgt tttgaccatt
1500
gagccgatg gctcaattgc ctataaagag tacgaagata tgatagctac aaagtgcacc
1560
tgtcgtaaac aaatggctct cttaaacct tgagcctatt tggcaaagta actactgtgt
1620
gcctatgtgt gccttcaaga gaaagcttca tatattaagt ctctaaatgt agcatatgtt
1680
atataaagag gagcctgtgt aggttagtac cttctatggc atctatcagg ataaagggat
1740
aacatcaatt gttgctacag agcctttttt tatttccaaa tttaaataaa atataattat
1800
tgtggagaac tttacatttt tttccttgag tgattttttt tcttttcata ggagtcttat
1860
tcttgatagg gaaaaaacct taattagcat caatcctgga tggacttgca gctataaata
1920
ggcaattcag attgctgtag tcttaataga agaataaatt tactgtcaat ggcaaaaaaa
1980
aaaaaaaaa
1989

<210> 5908

<211> 454

<212> PRT

<213> Homo sapiens

<400> 5908

```

Met Ala Arg Pro Asn Lys Phe Leu Leu Trp Phe Cys Cys Phe Ala Trp
 1           5           10           15
Leu Cys Phe Pro Ile Ser Leu Gly Ser Gln Ala Ser Gly Gly Glu Ala
 20           25           30
Gln Ile Ala Ala Ser Ala Glu Leu Glu Ser Gly Ala Met Pro Trp Ser
 35           40           45
Leu Leu Gln His Ile Asp Glu Arg Asp Arg Ala Gly Leu Leu Pro Ala
 50           55           60
Leu Phe Lys Val Leu Ser Val Gly Arg Gly Gly Ser Pro Arg Leu Gln
 65           70           75           80
Pro Asp Ser Arg Ala Leu His Tyr Met Lys Lys Leu Tyr Lys Thr Tyr
 85           90           95
Ala Thr Lys Glu Gly Ile Pro Lys Ser Asn Arg Ser His Leu Tyr Asn
 100          105          110
Thr Val Arg Leu Phe Thr Pro Cys Thr Arg His Lys Gln Ala Pro Gly
 115          120          125
Asp Gln Val Thr Gly Ile Leu Pro Ser Val Glu Leu Leu Phe Asn Leu
 130          135          140
Asp Arg Ile Thr Thr Val Glu His Leu Leu Lys Ser Val Leu Leu Tyr
 145          150          155          160
Asn Ile Asn Asn Ser Val Ser Phe Ser Ser Ala Val Lys Cys Val Cys
 165          170          175
Asn Leu Met Ile Lys Glu Pro Lys Ser Ser Ser Arg Thr Leu Gly Arg
 180          185          190
Ala Pro Tyr Ser Phe Thr Phe Asn Ser Gln Phe Glu Phe Gly Lys Lys
 195          200          205
His Lys Trp Ile Gln Ile Asp Val Thr Ser Leu Leu Gln Pro Leu Val
 210          215          220
Ala Ser Asn Lys Arg Ser Ile His Met Ser Ile Asn Phe Thr Cys Met
 225          230          235          240
Lys Asp Gln Leu Glu His Pro Ser Ala Gln Asn Gly Leu Phe Asn Met
 245          250          255
Thr Leu Val Ser Pro Ser Leu Ile Leu Tyr Leu Asn Asp Thr Ser Ala
 260          265          270
Gln Ala Tyr His Ser Trp Tyr Ser Leu His Tyr Lys Arg Arg Pro Ser
 275          280          285
Gln Gly Pro Asp Gln Glu Arg Ser Leu Ser Ala Tyr Pro Val Gly Glu
 290          295          300
Glu Ala Ala Glu Asp Gly Arg Ser Ser His His Arg His Arg Arg Gly
 305          310          315          320
Gln Glu Thr Val Ser Ser Glu Leu Lys Lys Pro Leu Gly Pro Ala Ser
 325          330          335
Phe Asn Leu Ser Glu Tyr Phe Arg Gln Phe Leu Leu Pro Gln Asn Glu
 340          345          350
Cys Glu Leu His Asp Phe Arg Leu Ser Phe Ser Gln Leu Lys Trp Asp
 355          360          365
Asn Trp Ile Val Ala Pro His Arg Tyr Asn Pro Arg Tyr Cys Lys Gly
 370          375          380
Asp Cys Pro Arg Ala Val Gly His Arg Tyr Gly Ser Pro Val His Thr
 385          390          395          400
Met Val Gln Asn Ile Ile Tyr Glu Lys Leu Asp Ser Ser Val Pro Arg

```


aaaatacctc aggaaaggcc aacatcagca gaactattaa ggcattgactt tgttcgacga
1260
gaccggccac tacgtgtcct cattgacctc atacagagga caaaagatgc agttcgtgag
1320
ctagataacc tacagtaccg aaaaatgaaa aaaatacttt tccaagagac acggaatgga
1380
cccttgaatg agtcacagga ggatgaggaa gacagtgaac atggaaccag cctgaacagg
1440
gaaatggaca gcctgggcag caaccattcc attccaagca tgtccgtgag cacaggcagc
1500
cagagcagca gtgtgaacag catgcaggaa gtcattggacg agagcagttc cgaacttgtc
1560
atgatgcacg atgacgaaag cacaatcaat tccagctcct ccgtcgtgca taagaaagat
1620
catgtattca taagggatga ggcgggccac ggcgatccca ggctgagcc gcggcctacc
1680
cagtcagttc agagccaggc cctccactac cggaacagag agcgctttgc cacgatcaaa
1740
tcagcatctt tggttacacg acagatccat gagcatgagc aggagaacga gttgcgggaa
1800
cagatgtcag gttataagcg gatgcggcgc cagcaccaga agcagctgat cgccctggag
1860
aacaagctga aggctgagat ggacgagcac cgctcaagc tacagaagga ggtggagacg
1920
catgccaaca actcgtccat cgagctggag aagctggcca agaagcaagt ggctatcata
1980
gaaaaggagg caaaggtagc tgcagcagat gagaagaagt tccagcaaca gatcttggcc
2040
cagcagaaga aagatttgac aactttctta gaaagtcaga agaagcagta taagatttgt
2100
aaggaaaaaa taaaagagga aatgaatgag gaccatagca caccaagaa agagaagcaa
2160
gagcggatct tcaaacataa agagaacttg caacacacac aggctgaaga ggaagcccac
2220
cttctcactt caacaggaga ctggactacg accaaaaatt gtcgtttctt caagcggaaa
2280
ataatgatca agcggcacga ggtggagcag cagaacattc gggaggaact aaataaaaag
2340
aggaccatga aggagatgga gcatgccatg ctaatccggc acgacgagtc caccgagag
2400
ctagagtaca ggcagctgca cacgttacag aagctacgga tggatctgat ccgtttacag
2460
caccagacgg aactggaaaa ccagctggag tacaataaga ggcgagaaag agaactgcac
2520
agaaagcatg tcatggaact tcggcaacag ccaaaaaact taaaggccat ggaaatgcaa
2580
attaaaaaac agtttcagga cacttgcaaa gtacagacca aacagtataa agcactcaag
2640
aatcaccagt tggaagttac tccaaagaat gagcacaaaa caatcttaaa gacactgaaa
2700
gatgagcaga caagaaaact tgccattttg gcagagcagt atgaacagag tataaatgaa
2760
atgatggcct ctcaagcgtt acggctagat gaggctcaag aagcagaatg ccaggccttg
2820

aggctacagc tccagcagga aatggagctg ctcaacgcct accagagcaa aatcaagatg
2880
caaacagagg cacaacatga acgtgagctc cagaagctag agcagagagt gtctctgcgc
2940
agagcacacc ttgagcagaa gattgaagag gagctggctg cccttcagaa ggaacgcagc
3000
gagagaataa agaacctatt ggaaaggcaa gagcgagaga ttgaaacttt tgacatggag
3060
agcctcagaa tgggatttgg gaatttgggtt acatttagatt ttcctaagga ggactacaga
3120
tgagattaaa ttttttgcca ttacaaaaa aaaaaaaaaa aaagaaaaca aaaaaaatt
3180
cagacctgc aaaaccacat tccccatttt aacgggcgtt gctctcactc tctctctctc
3240
ttactcttac tgacatcgtg tcggactagt gcctgtttat tcttactcca tcaggggccc
3300
cttctctccc cccgtgtcaa ctttcagtgc tggccaaaac ctggccgtct cttctattca
3360
cagtacacgt cacagtattg atgtgattca aaatgtttca gtgaaaactt tggagacagt
3420
ttaacaaaa ccaataaacc aacaacaaaa aaagtggatg tatattgctt taagcaatca
3480
ctcattacca ccaatctgtg aaagtaaagc aaaaaataat aataataaat gccaggggg
3540
agagagacac aatatccgca gccttacacc ttaactagct gctgcattat tttattttat
3600
tttatttttt tggatatttat tcatcaggaa taacaaaaaac aaagttttat taaagattga
3660
aaatttgata cattttacag aaactaattg tgatgtacat atcagtgggtg acatattatt
3720
acttttttgg ggacgggggg tgggtggggg gaagagatct tgtgattttt aagaacctgc
3780
tggcaagagt ttaacttgtc ttcagcatat tctgattgta tcataatcat tttctgctgt
3840
tgcagaggat gtgaatacac ttaaggagct cacagaatcc cagtagcaca aattgggctt
3900
tggcaaatcg tgtattttgt gtatagaagg aatttaagga gaggtattac ttattttcat
3960
attgtatttt aactgtttct ctgatcaaat ttttttactt cctcctcctg ttctctccca
4020
cctccctcct tttccagttc agtatttggg gttcaacact gtctctcaat cagatcatct
4080
tgatcttttt ctttatctcc cttccccctc ctaagtccca tttcttggtc ataaatattg
4140
cattattcac actttcaaac tgtgtatttt cttacaataa aaaatgatga aaaaaaaaaa
4200
ggctttactt cttttgcatg cactttaaaa acaaaacaaa acatttttca ggttccaagg
4260
aagagcatga taactgtcag agcttttaat tatatttgta aataaaagtg ttcatcacaa
4320
aaaaaaaaa aaaaaaaaaa aaa
4343

<210> 5910

<211> 899

<212> PRT

<213> Homo sapiens

<400> 5910

```

Met Arg Lys Gly Val Leu Lys Asp Pro Glu Ile Ala Asp Leu Phe Tyr
 1          5          10          15
Lys Asp Asp Pro Glu Glu Leu Phe Ile Gly Leu His Glu Ile Gly His
 20          25          30
Gly Ser Phe Gly Ala Val Tyr Phe Ala Thr Asn Ala His Thr Ser Glu
 35          40          45
Val Val Ala Ile Lys Lys Met Ser Tyr Ser Gly Lys Gln Thr His Glu
 50          55          60
Lys Trp Gln Asp Ile Leu Lys Glu Val Lys Phe Leu Arg Gln Leu Lys
 65          70          75          80
His Pro Asn Thr Ile Glu Tyr Lys Gly Cys Tyr Leu Lys Glu His Thr
 85          90          95
Ala Trp Leu Val Met Glu Tyr Cys Leu Gly Ser Ala Ser Asp Leu Leu
100          105          110
Glu Val His Lys Lys Pro Leu Gln Glu Val Glu Ile Ala Ala Ile Thr
115          120          125
His Gly Ala Leu His Gly Leu Ala Tyr Leu His Ser His Ala Leu Ile
130          135          140
His Arg Asp Ile Lys Ala Gly Asn Ile Leu Leu Thr Glu Pro Gly Gln
145          150          155          160
Val Lys Leu Ala Asp Phe Gly Ser Ala Ser Met Ala Ser Pro Ala Asn
165          170          175
Ser Phe Val Gly Thr Pro Tyr Trp Met Ala Pro Glu Val Ile Leu Ala
180          185          190
Met Asp Glu Gly Gln Tyr Asp Gly Lys Val Asp Ile Trp Ser Leu Gly
195          200          205
Ile Thr Cys Ile Glu Leu Ala Glu Arg Lys Pro Pro Leu Phe Asn Met
210          215          220
Asn Ala Met Ser Ala Leu Tyr His Ile Ala Gln Asn Asp Ser Pro Thr
225          230          235          240
Leu Gln Ser Asn Glu Trp Thr Asp Ser Phe Arg Arg Phe Val Asp Tyr
245          250          255
Cys Leu Gln Lys Ile Pro Gln Glu Arg Pro Thr Ser Ala Glu Leu Leu
260          265          270
Arg His Asp Phe Val Arg Arg Asp Arg Pro Leu Arg Val Leu Ile Asp
275          280          285
Leu Ile Gln Arg Thr Lys Asp Ala Val Arg Glu Leu Asp Asn Leu Gln
290          295          300
Tyr Arg Lys Met Lys Lys Ile Leu Phe Gln Glu Thr Arg Asn Gly Pro
305          310          315          320
Leu Asn Glu Ser Gln Glu Asp Glu Glu Asp Ser Glu His Gly Thr Ser
325          330          335
Leu Asn Arg Glu Met Asp Ser Leu Gly Ser Asn His Ser Ile Pro Ser
340          345          350
Met Ser Val Ser Thr Gly Ser Gln Ser Ser Ser Val Asn Ser Met Gln
355          360          365
Glu Val Met Asp Glu Ser Ser Ser Glu Leu Val Met Met His Asp Asp
370          375          380
Glu Ser Thr Ile Asn Ser Ser Ser Ser Val Val His Lys Lys Asp His

```

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 385 | | | | | 390 | | | | | 395 | | | | 400 |
| Val | Phe | Ile | Arg | Asp | Glu | Ala | Gly | His | Gly | Asp | Pro | Arg | Pro | Glu |
| | | | | 405 | | | | | 410 | | | | | 415 |
| Arg | Pro | Thr | Gln | Ser | Val | Gln | Ser | Gln | Ala | Leu | His | Tyr | Arg | Asn |
| | | | 420 | | | | | 425 | | | | | 430 | |
| Glu | Arg | Phe | Ala | Thr | Ile | Lys | Ser | Ala | Ser | Leu | Val | Thr | Arg | Gln |
| | | 435 | | | | | 440 | | | | | 445 | | |
| His | Glu | His | Glu | Gln | Glu | Asn | Glu | Leu | Arg | Glu | Gln | Met | Ser | Gly |
| | 450 | | | | | 455 | | | | 460 | | | | |
| Lys | Arg | Met | Arg | Arg | Gln | His | Gln | Lys | Gln | Leu | Ile | Ala | Leu | Glu |
| 465 | | | | | 470 | | | | 475 | | | | | 480 |
| Lys | Leu | Lys | Ala | Glu | Met | Asp | Glu | His | Arg | Leu | Lys | Leu | Gln | Lys |
| | | | | 485 | | | | 490 | | | | | | 495 |
| Val | Glu | Thr | His | Ala | Asn | Asn | Ser | Ser | Ile | Glu | Leu | Glu | Lys | Leu |
| | | | 500 | | | | | 505 | | | | | 510 | |
| Lys | Lys | Gln | Val | Ala | Ile | Ile | Glu | Lys | Glu | Ala | Lys | Val | Ala | Ala |
| | | 515 | | | | | 520 | | | | | 525 | | |
| Asp | Glu | Lys | Lys | Phe | Gln | Gln | Gln | Ile | Leu | Ala | Gln | Gln | Lys | Lys |
| | 530 | | | | 535 | | | | | 540 | | | | |
| Leu | Thr | Thr | Phe | Leu | Glu | Ser | Gln | Lys | Lys | Gln | Tyr | Lys | Ile | Cys |
| 545 | | | | | 550 | | | | | 555 | | | | 560 |
| Glu | Lys | Ile | Lys | Glu | Met | Asn | Glu | Asp | His | Ser | Thr | Pro | Lys | Lys |
| | | | | 565 | | | | 570 | | | | | | 575 |
| Glu | Lys | Gln | Glu | Arg | Ile | Phe | Lys | His | Lys | Glu | Asn | Leu | Gln | His |
| | | 580 | | | | | | 585 | | | | | 590 | |
| Gln | Ala | Glu | Glu | Ala | His | Leu | Leu | Thr | Ser | Thr | Gly | Asp | Trp | Thr |
| | | 595 | | | | 600 | | | | | 605 | | | |
| Thr | Thr | Lys | Asn | Cys | Arg | Phe | Phe | Lys | Arg | Lys | Ile | Met | Ile | Lys |
| | 610 | | | | | 615 | | | | | 620 | | | |
| His | Glu | Val | Glu | Gln | Gln | Asn | Ile | Arg | Glu | Glu | Leu | Asn | Lys | Lys |
| 625 | | | | 630 | | | | | | 635 | | | | 640 |
| Thr | Met | Lys | Glu | Met | Glu | His | Ala | Met | Leu | Ile | Arg | His | Asp | Glu |
| | | | | 645 | | | | | 650 | | | | | 655 |
| Thr | Arg | Glu | Leu | Glu | Tyr | Arg | Gln | Leu | His | Thr | Leu | Gln | Lys | Leu |
| | | 660 | | | | | | 665 | | | | | 670 | |
| Met | Asp | Leu | Ile | Arg | Leu | Gln | His | Gln | Thr | Glu | Leu | Glu | Asn | Gln |
| | 675 | | | | | | 680 | | | | | 685 | | |
| Glu | Tyr | Asn | Lys | Arg | Arg | Glu | Arg | Glu | Leu | His | Arg | Lys | His | Val |
| | 690 | | | | | 695 | | | | 700 | | | | |
| Glu | Leu | Arg | Gln | Gln | Pro | Lys | Asn | Leu | Lys | Ala | Met | Glu | Met | Gln |
| 705 | | | | | 710 | | | | | 715 | | | | 720 |
| Lys | Lys | Gln | Phe | Gln | Asp | Thr | Cys | Lys | Val | Gln | Thr | Lys | Gln | Tyr |
| | | | | 725 | | | | | 730 | | | | | 735 |
| Ala | Leu | Lys | Asn | His | Gln | Leu | Glu | Val | Thr | Pro | Lys | Asn | Glu | His |
| | | | 740 | | | | | 745 | | | | | 750 | |
| Thr | Ile | Leu | Lys | Thr | Leu | Lys | Asp | Glu | Gln | Thr | Arg | Lys | Leu | Ala |
| | | 755 | | | | | 760 | | | | | 765 | | |
| Leu | Ala | Glu | Gln | Tyr | Glu | Gln | Ser | Ile | Asn | Glu | Met | Met | Ala | Ser |
| | 770 | | | | | 775 | | | | 780 | | | | |
| Ala | Leu | Arg | Leu | Asp | Glu | Ala | Gln | Glu | Ala | Glu | Cys | Gln | Ala | Leu |
| 785 | | | | | 790 | | | | | 795 | | | | 800 |
| Leu | Gln | Leu | Gln | Gln | Glu | Met | Glu | Leu | Leu | Asn | Ala | Tyr | Gln | Ser |
| | | | | 805 | | | | | 810 | | | | | 815 |
| Ile | Lys | Met | Gln | Thr | Glu | Ala | Gln | His | Glu | Arg | Glu | Leu | Gln | Lys |


```

<400> 5912
Asp Gly Lys Pro Glu Ile Pro Val Leu Cys Phe Ala His Ala Gly Ser
 1                5                10                15
Cys Arg Pro Glu Leu Phe Leu Phe Gly Asn Leu Gly Ser Ser Ala Glu
                20                25                30
Asp Leu Ile Leu Pro Asp Gly Gly Thr Pro Ala Gly Thr Ser Ser Pro
                35                40                45
Ala Ser Ser Ser Ser Leu Leu Asn Arg Leu Gln Leu Asp Asp Asp Ile

```

| | | | | |
|---|-------------------------|---------------------|-----|----|
| 50 | | 55 | | 60 |
| Asp Gly Glu Thr Arg | Asp Leu Phe Val Ile Val | Asp Asp Pro Lys Lys | | |
| 65 | 70 | 75 | 80 | |
| His Val Cys Thr Met Glu Thr Tyr Ile Thr Tyr Arg Ile Thr Thr Lys | | | | |
| | 85 | 90 | 95 | |
| Ser Thr Arg Val Glu Phe Asp Leu Pro Glu Tyr Ser Val Arg Arg Arg | | | | |
| | 100 | 105 | 110 | |
| Tyr Gln Asp Phe Asp Trp Leu Arg Ser Lys Leu Glu Glu Ser Gln Pro | | | | |
| | 115 | 120 | 125 | |
| Thr His Leu Ile Pro Pro Leu Pro Glu Lys Phe Val Val Lys Gly Val | | | | |
| | 130 | 135 | 140 | |
| Val Asp Arg Phe Ser Glu Glu Phe Val Glu Thr Arg Arg Lys Ala Leu | | | | |
| 145 | 150 | 155 | 160 | |
| Asp Lys Phe Leu Lys Arg Ile Thr Asp His Pro Val Leu Ser Phe Asn | | | | |
| | 165 | 170 | 175 | |
| Glu His Phe Asn Ile Phe Leu Thr Ala Lys Asp Leu Asn Ala Tyr Lys | | | | |
| | 180 | 185 | 190 | |
| Lys Gln Gly Ile Ala Leu Leu Thr Arg Met Gly Glu Ser Val Lys His | | | | |
| | 195 | 200 | 205 | |
| Val Thr Arg | | | | |
| 210 | | | | |

<210> 5913

<211> 2495

<212> DNA

<213> Homo sapiens

<400> 5913

```

atTTTTTTTT tTTTTTTTTT tTTTTTTTTT tTTTTTTTTT tttttaatct tctcttcctc
60
cattttatag ggagaaaacc aagccactgg ccccgttaca cagcaagtta gtagtaagac
120
tgagattcga accctggtca aacagacttt ccattttggt ccactgactc agtcttctct
180
tttacacttg aatcagactt ttagttttat ttagtttttt gagtccatag ctgtcttcct
240
gtactgtctt gactctttga ctaaactgat ttcacatctt taaaattatg ctttcctttt
300
aggctcattt ttagctcagc tggtgacagc tattttttaa tgtaacatga cataatatat
360
ttcctaaata atttaaaata atctagcttg agctgctctg aagggttagtc agttggtggt
420
gtgcatagag gtagagcctt cccccactct caaggatgct gtgaggggta ttcctaccat
480
gtggtgagtt gggagggttt cctgaggtcc ttttccatcc tgagactctg gttttccatt
540
ttgtttctca caggccaggg ctttgaccga cacttgtttg ctctgcggca tctggcagca
600
gcanaaggga tcattcttgcc tgagctctac ctggaccctg catacgggca gataaaccac
660
aatgtcctgt ccacgagcac actgagcagc ccagcagtga accntttagt gtttgcccct
720
gtggtctctg atgcttttgg tggtgggtat gctgttcatg acaactggat aggctgcaat
780

```

gtctcttctt acccaggccg caatgcccgg gagtttctcc aatgtgtgga gaaggctnta
840
gaagacatgt ttgatgcctt agaaggcaaa tccatcaaaa gttaacttct gggcagatga
900
aaagctacca tcacttcttc atcatgaaaa ctgggaggcc gggcatggtg gctcatgcct
960
gtaatcccag cattttgaga ggctgaggcg ggtggatcac ttgaggtcag gagtttgaga
1020
ccaacctggc caacatggtg aaaccttgct tctactaaaa atacaaaaat tagctgggtg
1080
tggtggcatg tgccataaat cccagctact tgggagggtg aagcagaatt gcttgaacct
1140
aggaggtgga ggttgcagt agctgagatc acaccactgc actccggcct gggcgacaga
1200
gcgagactgt ctcaaaaaaa caaaaaagaa aaaaaaactg gggcctgtgt agccagtggg
1260
tgctattctg tgaaactaat cataagctgc ctaggcagcc agctacaggc ttgagcttta
1320
aattcatggt tttaaagcta aacgtaattt ccacttggga ctagatcaca actgaagata
1380
acaagagatt taagttttaa gggcatttaa tcaggaggaa aggtttggaa aactaactca
1440
ggtgtattta ttgtttaagc agaaataaag ttttaattttt gcttgaagat ggttccctaat
1500
ttcttttaac ctaattccta atcctcacia agatctttcc aacagcaagt tcagtaagtt
1560
caggtaacag tacgtcacca ttggcttctg gctcattgag tgatgggtggg atcgcggttt
1620
catctctgta aacttgcctt tgactgggga gataccatct ccttaaaaaat actcttcatt
1680
ttcctaagga gtgaactgct gctgcacgaa ttcttatttg tggagggagt agctgcctcc
1740
ttacttcacc ttcatgcacc agtgcagcgt gaacaggggc tttattgatg gggcttggga
1800
agctgtaata aagtccagca tgcagattgt gaagggttcg tatagccacc aggagacaag
1860
ggtcaaagga acgagcctct gtgggctctg ctgcttagag tactttgtcc tttctcagtt
1920
cttaaggga actgggaagg aagagggatc agcacttcac aaactgggtg gtgacctcat
1980
agattccac agactcctgg gccttttcat catagtcagt ccagtccttc tctgcagat
2040
taatgtcact gaaggctgtc cctgactcca caccttcagc agcaaaccac gcctgcggt
2100
ggaaatcaac tgggtcaagg ccccggcact caaactccac tattgtcttg aagttctcat
2160
tgtcttcagc attgtaaggc ttgatggtgc tgcttaaaat ctcatggaa tttctcttg
2220
cacacagctt gcacttctgg accatggaag cactgccacg gcccccttc agtgccacac
2280
tgtccatcag ccgatgtac tgccacttgt ccgaaatctc accacagttg ccacatttca
2340
tcttcaggta ccaccggaag tcctcgccca cgggcccggag gttggtgatg ttctccagcg
2400

tggttttgag ttgcagcgcg attttcccca tggtagccct ctccgcccg tgctggctgc
 2460
 ggcccttgcc gttgctttcc ggcgcgtcgt aaaag
 2495

<210> 5914
 <211> 158
 <212> PRT
 <213> Homo sapiens

<400> 5914
 Ser Val Gly Gly Val His Arg Gly Arg Ala Phe Pro His Ser Gln Gly
 1 5 10 15
 Cys Cys Glu Gly Tyr Ser Tyr His Val Val Ser Trp Glu Val Phe Leu
 20 25 30
 Arg Ser Phe Ser Ile Leu Arg Leu Trp Phe Ser Ile Leu Phe Leu Thr
 35 40 45
 Gly Gln Gly Phe Asp Arg His Leu Phe Ala Leu Arg His Leu Ala Ala
 50 55 60
 Ala Xaa Gly Ile Ile Leu Pro Glu Leu Tyr Leu Asp Pro Ala Tyr Gly
 65 70 75 80
 Gln Ile Asn His Asn Val Leu Ser Thr Ser Thr Leu Ser Ser Pro Ala
 85 90 95
 Val Asn Xaa Cys Arg Phe Ala Pro Val Ser Asp Ala Phe Gly Val
 100 105 110
 Gly Tyr Ala Val His Asp Asn Trp Ile Gly Cys Asn Val Ser Ser Tyr
 115 120 125
 Pro Gly Arg Asn Ala Arg Glu Phe Leu Gln Cys Val Glu Lys Ala Xaa
 130 135 140
 Glu Asp Met Phe Asp Ala Leu Glu Gly Lys Ser Ile Lys Ser
 145 150 155

<210> 5915
 <211> 457
 <212> DNA
 <213> Homo sapiens

<400> 5915
 taccgaagac tcagcaactc cagcctctgt agcattgaag aagagcaccg aatgggtgtat
 60
 gaaatggtac agcggattct cttgtcaaca cgagggttatg tcaacttcgt gaatgaagta
 120
 tttcaccagg catttttgtt gccttctctgt gagatagctg taacaagaaa agtagttcaa
 180
 gtgtacagaa agtggattct ccaggacaaa cctgtgttca tggaggagcc agatagaaaa
 240
 gatgttgccc aagaagatgc tgaaaaatta ggattttccg agactgatag caaggaggcc
 300
 tcatttgaaa gttctgggtca taaacgatct tccagttggg gacgcacata ctcttcaca
 360
 agtgcaatga gcagagggtg tgtgacagag gaggaaaata caaatgtgaa agccggcgtc
 420
 caggctttgt tgcaggtatt tttggcgaac tctgcag
 457

<210> 5916
 <211> 152
 <212> PRT
 <213> Homo sapiens

<400> 5916
 Tyr Arg Arg Leu Ser Asn Ser Ser Leu Cys Ser Ile Glu Glu Glu His
 1 5 10 15
 Arg Met Val Tyr Glu Met Val Gln Arg Ile Leu Leu Ser Thr Arg Gly
 20 25 30
 Tyr Val Asn Phe Val Asn Glu Val Phe His Gln Ala Phe Leu Leu Pro
 35 40 45
 Ser Cys Glu Ile Ala Val Thr Arg Lys Val Val Gln Val Tyr Arg Lys
 50 55 60
 Trp Ile Leu Gln Asp Lys Pro Val Phe Met Glu Glu Pro Asp Arg Lys
 65 70 75 80
 Asp Val Ala Gln Glu Asp Ala Glu Lys Leu Gly Phe Ser Glu Thr Asp
 85 90 95
 Ser Lys Glu Ala Ser Ser Glu Ser Ser Gly His Lys Arg Ser Ser Ser
 100 105 110
 Trp Gly Arg Thr Tyr Ser Phe Thr Ser Ala Met Ser Arg Gly Cys Val
 115 120 125
 Thr Glu Glu Glu Asn Thr Asn Val Lys Ala Gly Val Gln Ala Leu Leu
 130 135 140
 Gln Val Phe Leu Ala Asn Ser Ala
 145 150

<210> 5917
 <211> 3727
 <212> DNA
 <213> Homo sapiens

<400> 5917
 gcttgcgggc gcgtgacggg ggcgcacaag aaggctccgc cggccctgat cgacgagtgc
 60
 atcgagaagt tcaatcacgt cagcggcagc cgggggtccg agagccccg cccaacccg
 120
 ccccatgccg cgcgccacag ggagccagga cctgtgcgca ggcccatgcg caagtccttc
 180
 tcccagcccg gcttgcgtc gctggccttt aggaaggagc tgcaggatgg gggcctccga
 240
 agcagcggct tcttcagctc cttcgaggag agcgacattg agaaccacct cattagcggg
 300
 cacaatattg tgcagccac agatatcgag gaaaatcgaa ctatgctctt cacgattggc
 360
 cagtctgaag ttacctcat cagtcctgac accaaaaaa tagcattgga gaaaaatctt
 420
 aaggagatat ccttttgctc tcagggcatc agacacgtgg accactttgg gtttatctgt
 480
 cgggagtctt ccggaggtgg cggctttcat tttgtctgtt acgtgtttca gtgcacaaat
 540
 gaggctctgg ttgatgaaat tatgatgacc ctgaaacagg ctttcacggg ggccgcagtg
 600

cagcagacag ctaaggcgcc agcccagctg tgtgagggt gcccctgca aagcctgcac
 660
 aagctctgtg agaggataga gggaaatgaat tcttccaaaa caaaactaga actgcaaaag
 720
 cacctgacga cattaaccaa tcaggagcag gcgactatct ttgaagaggt tcagaaattg
 780
 agaccgagaa atgagcagcg agagaatgaa ttgattatct cttttctgag atgtttatat
 840
 gaagagaaac agaaagaaca catccatatt ggggagatga agcagacatc gcagatggca
 900
 gcagagaata ttggaagtga attaccaccc agtgccactc gatttaggct agatatgctg
 960
 aaaaacaaag caaagagatc tttaacagag tcttttagaaa gtattttgtc ccggggtaat
 1020
 aaagccagag gcctgcagga aactccatc agtgtggatc tggatagctc cctgtctagt
 1080
 acattaagta acaccagcaa agagccatct gtgtgtgaaa aggaggcctt gccatctct
 1140
 gagagctcct ttaagctcct cggctcctcg gaggacctgt ccagtgactc ggagagtcac
 1200
 ctcccagaag agccagctcc gctgtcgccc cagcaggcct tcaggaggcg agcaaacacc
 1260
 ctgagtcact tccccatcga atgccaggaa cctccacaac ctgcccgggg gtccccgggg
 1320
 gtttcgcaaa ggaaacttat gaggtatcac tcagttagca cagagacgcc tcatgaacga
 1380
 aaggactttg aatccaaagc aaaccatctt ggtgattctg gtgggactcc tgtgaagacc
 1440
 cggaggcatt cctggaggca gcagatatcc ctccagtag ccaccccgca gaaggcgtgc
 1500
 gattcttcca gcagatatga agattattca gagctgggag agcttcccc acgatctcct
 1560
 ttagaaccag tttgtgaaga tgggcccttt ggccccacc agaggaaaag aaaaggacat
 1620
 ctggtgagct ccgagagctg tggcaaaggg ctattcttca acagatactg cntgcttaga
 1680
 atggagaagg aaaatcagaa gctccaagcc tctgaaaatg atttgctgaa caagcgctg
 1740
 aagctcgatt atgaagaaat tactccctgt cttaaagaag taactacagt gtgggaaaag
 1800
 atgcttagca ctccaggaag atcaaaaatt aagtttgaca tggaaaaaat gcactcggct
 1860
 gttgggcaag gtgtgccacg tcatcaccga ggtgaaatct ggaaatttct agctgagcaa
 1920
 ttccacctta aacaccagtt tcccagcaaa cagcagccaa aggatgtgcc atacaaagaa
 1980
 ctcttaaagc agctgacttc ccagcagcat gcgattctta ttgaccttg gcgaaccttt
 2040
 cctacacacc catacttctc tgcccagctt ggagcaggac agctatcgct ttacaacatt
 2100
 ttgaaggcct actcacttct agaccaggaa gtgggatatt gccaaagtct cagctttgta
 2160
 gcaggcattt tgcttcttca tatgagttag gaagaggcgt ttaaaatgct caagtttctg
 2220

atgtttgaca tggggctgcg gaaacagtat cggccagaca tgattatattt acagatccag
2280
atgtaccagc tctcgagggt gcttcatgat taccacagag acctctacaa tcacctggag
2340
gagcacgaga tcggccccag cctctacgct gccccctggt tcctcaccat gtttgacctca
2400
cagttcccg c tgggattcgt agccagagtc tttgatatga tttttcttca gggaacagag
2460
gtcatattta aagtggcttt aagtctgttg ggaagccata agcccttgat tctgcagcat
2520
gaaaacctag aaaccatagt tgactttata aaaagcacgc tacccaacct tggcttggtgta
2580
cagatggaaa agaccatcaa tcaggtatatt gaaatggaca tcgctaaaca gttacaagct
2640
tatgaagttg agtaccacgt ccttcaagaa gaacttatcg attcctctcc tctcagtgc
2700
aaccaaagaa tggataaatt agagaaaacc aacagcagct tacgcaaaca gaaccttgac
2760
ctccttgaac agttgcagggt ggcaaattgtt aggatccaaa gccttgaggc caccattgag
2820
aagctcctga gcagtgcagag caagctgaag caggccatgc ttaccttaga actggagcgg
2880
tcgctgctg cagacgggtg aggagctgcg gcggcggagc gcagagccca gcgaccggga
2940
gcctgagtg c acgcagccc agcccacggg cgactgacag cttgcaggag agattgcaac
3000
accatcacac tgtccaggcc ttaactgaga gggacagaag acgctggaag gagagaagga
3060
agcgggaagt gtgcttctca gggaggaaac cggcttgcca gcaagtagat tcttacgaac
3120
tccaacttgc aattcagggg gcatgtccca gtgttttttt tgtgtttttt agatactaaa
3180
tcgtcccttc tccagtcctg attactgtac acagtagctt tagatggcgt ggacgtgaat
3240
aaatgcaact tatgttttct tgttggttcc tttttgagtgc tctgtgtgtt tgtaaagagc
3300
attcacaata cgggtggaatt tcaaaagctg gaagagctcg agatcatgcc tcaggcaaag
3360
gcgtgggtcc atcgttcttc cgagagggtt tgtgtggcga ctacaccctc agcgtccctg
3420
gcaagggtgca gttggctctc gccattctt gttatggaaa cctaagatga tcattgggaa
3480
gatcagtgat cttgggtcat tgatccctgg ctgagaggat agcggtttcc atcataaacc
3540
aagatgatga gttcagcctt tatccctcgt gggtccacta gatgtaactt aaaggagtta
3600
acatttgagg actttgttct acatcagatt ttactatttg aatgtttaag atcactttat
3660
tgaatttgaa gatcatcaaa ttaaataaaa tgatttattt aatttgata tcctgaaaaa
3720
aaaaaaa
3727

<210> 5918

<211> 981

<212> PRT

<213> Homo sapiens

<400> 5918

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Cys | Gly | Arg | Val | Thr | Val | Ala | His | Lys | Lys | Ala | Pro | Pro | Ala | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ile | Asp | Glu | Cys | Ile | Glu | Lys | Phe | Asn | His | Val | Ser | Gly | Ser | Arg | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Glu | Ser | Pro | Arg | Pro | Asn | Pro | Pro | His | Ala | Ala | Arg | His | Arg | Glu |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Pro | Gly | Pro | Val | Arg | Arg | Pro | Met | Arg | Lys | Ser | Phe | Ser | Gln | Pro | Gly |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Leu | Arg | Ser | Leu | Ala | Phe | Arg | Lys | Glu | Leu | Gln | Asp | Gly | Gly | Leu | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ser | Ser | Gly | Phe | Phe | Ser | Ser | Phe | Glu | Glu | Ser | Asp | Ile | Glu | Asn | His |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Leu | Ile | Ser | Gly | His | Asn | Ile | Val | Gln | Pro | Thr | Asp | Ile | Glu | Glu | Asn |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Thr | Met | Leu | Phe | Thr | Ile | Gly | Gln | Ser | Glu | Val | Tyr | Leu | Ile | Ser |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Pro | Asp | Thr | Lys | Lys | Ile | Ala | Leu | Glu | Lys | Asn | Phe | Lys | Glu | Ile | Ser |
| | | | 130 | | | 135 | | | | | 140 | | | | |
| Phe | Cys | Ser | Gln | Gly | Ile | Arg | His | Val | Asp | His | Phe | Gly | Phe | Ile | Cys |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Arg | Glu | Ser | Ser | Gly | Gly | Gly | Gly | Phe | His | Phe | Val | Cys | Tyr | Val | Phe |
| | | | | 165 | | | | 170 | | | | | | 175 | |
| Gln | Cys | Thr | Asn | Glu | Ala | Leu | Val | Asp | Glu | Ile | Met | Met | Thr | Leu | Lys |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Gln | Ala | Phe | Thr | Val | Ala | Ala | Val | Gln | Gln | Thr | Ala | Lys | Ala | Pro | Ala |
| | | | 195 | | | | 200 | | | | | 205 | | | |
| Gln | Leu | Cys | Glu | Gly | Cys | Pro | Leu | Gln | Ser | Leu | His | Lys | Leu | Cys | Glu |
| | | | 210 | | | 215 | | | | | 220 | | | | |
| Arg | Ile | Glu | Gly | Met | Asn | Ser | Ser | Lys | Thr | Lys | Leu | Glu | Leu | Gln | Lys |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | |
| His | Leu | Thr | Thr | Leu | Thr | Asn | Gln | Glu | Gln | Ala | Thr | Ile | Phe | Glu | Glu |
| | | | | 245 | | | | 250 | | | | | | 255 | |
| Val | Gln | Lys | Leu | Arg | Pro | Arg | Asn | Glu | Gln | Arg | Glu | Asn | Glu | Leu | Ile |
| | | | 260 | | | | 265 | | | | | | 270 | | |
| Ile | Ser | Phe | Leu | Arg | Cys | Leu | Tyr | Glu | Glu | Lys | Gln | Lys | Glu | His | Ile |
| | | | 275 | | | | 280 | | | | | 285 | | | |
| His | Ile | Gly | Glu | Met | Lys | Gln | Thr | Ser | Gln | Met | Ala | Ala | Glu | Asn | Ile |
| | | | 290 | | | 295 | | | | | 300 | | | | |
| Gly | Ser | Glu | Leu | Pro | Pro | Ser | Ala | Thr | Arg | Phe | Arg | Leu | Asp | Met | Leu |
| 305 | | | | | 310 | | | | | 315 | | | | 320 | |
| Lys | Asn | Lys | Ala | Lys | Arg | Ser | Leu | Thr | Glu | Ser | Leu | Glu | Ser | Ile | Leu |
| | | | | 325 | | | | 330 | | | | | | 335 | |
| Ser | Arg | Gly | Asn | Lys | Ala | Arg | Gly | Leu | Gln | Glu | His | Ser | Ile | Ser | Val |
| | | | 340 | | | | 345 | | | | | | 350 | | |
| Asp | Leu | Asp | Ser | Ser | Leu | Ser | Ser | Thr | Leu | Ser | Asn | Thr | Ser | Lys | Glu |
| | | | 355 | | | | 360 | | | | | 365 | | | |
| Pro | Ser | Val | Cys | Glu | Lys | Glu | Ala | Leu | Pro | Ile | Ser | Glu | Ser | Ser | Phe |
| | | | 370 | | | 375 | | | | | 380 | | | | |
| Lys | Leu | Leu | Gly | Ser | Ser | Glu | Asp | Leu | Ser | Ser | Asp | Ser | Glu | Ser | His |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Leu | Pro | Glu | Glu | Pro | Ala | Pro | Leu | Ser | Pro | Gln | Gln | Ala | Phe | Arg | Arg |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Arg | Ala | Asn | Thr | Leu | Ser | His | Phe | Pro | Ile | Glu | Cys | Gln | Glu | Pro | Pro |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Gln | Pro | Ala | Arg | Gly | Ser | Pro | Gly | Val | Ser | Gln | Arg | Lys | Leu | Met | Arg |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Tyr | His | Ser | Val | Ser | Thr | Glu | Thr | Pro | His | Glu | Arg | Lys | Asp | Phe | Glu |
| | 450 | | | | | 455 | | | | 460 | | | | | |
| Ser | Lys | Ala | Asn | His | Leu | Gly | Asp | Ser | Gly | Gly | Thr | Pro | Val | Lys | Thr |
| 465 | | | | | 470 | | | | 475 | | | | | 480 | |
| Arg | Arg | His | Ser | Trp | Arg | Gln | Gln | Ile | Phe | Leu | Arg | Val | Ala | Thr | Pro |
| | | | 485 | | | | | 490 | | | | | 495 | | |
| Gln | Lys | Ala | Cys | Asp | Ser | Ser | Ser | Arg | Tyr | Glu | Asp | Tyr | Ser | Glu | Leu |
| | | 500 | | | | | 505 | | | | | 510 | | | |
| Gly | Glu | Leu | Pro | Pro | Arg | Ser | Pro | Leu | Glu | Pro | Val | Cys | Glu | Asp | Gly |
| | 515 | | | | | 520 | | | | | 525 | | | | |
| Pro | Phe | Gly | Pro | His | Gln | Arg | Lys | Arg | Lys | Gly | His | Leu | Val | Ser | Ser |
| | 530 | | | | 535 | | | | 540 | | | | | | |
| Glu | Ser | Cys | Gly | Lys | Gly | Leu | Phe | Phe | Asn | Arg | Tyr | Cys | Xaa | Leu | Arg |
| 545 | | | | 550 | | | | 555 | | | | | | 560 | |
| Met | Glu | Lys | Glu | Asn | Gln | Lys | Leu | Gln | Ala | Ser | Glu | Asn | Asp | Leu | Leu |
| | | | 565 | | | | 570 | | | | | | 575 | | |
| Asn | Lys | Arg | Leu | Lys | Leu | Asp | Tyr | Glu | Glu | Ile | Thr | Pro | Cys | Leu | Lys |
| | | 580 | | | | 585 | | | | | 590 | | | | |
| Glu | Val | Thr | Thr | Val | Trp | Glu | Lys | Met | Leu | Ser | Thr | Pro | Gly | Arg | Ser |
| | 595 | | | | 600 | | | | | | 605 | | | | |
| Lys | Ile | Lys | Phe | Asp | Met | Glu | Lys | Met | His | Ser | Ala | Val | Gly | Gln | Gly |
| | 610 | | | 615 | | | | 620 | | | | | | | |
| Val | Pro | Arg | His | His | Arg | Gly | Glu | Ile | Trp | Lys | Phe | Leu | Ala | Glu | Gln |
| 625 | | | | 630 | | | | 635 | | | | | | 640 | |
| Phe | His | Leu | Lys | His | Gln | Phe | Pro | Ser | Lys | Gln | Gln | Pro | Lys | Asp | Val |
| | | 645 | | | | | 650 | | | | | | 655 | | |
| Pro | Tyr | Lys | Glu | Leu | Leu | Lys | Gln | Leu | Thr | Ser | Gln | Gln | His | Ala | Ile |
| | 660 | | | | | 665 | | | | | 670 | | | | |
| Leu | Ile | Asp | Leu | Gly | Arg | Thr | Phe | Pro | Thr | His | Pro | Tyr | Phe | Ser | Ala |
| | 675 | | | | 680 | | | | 685 | | | | | | |
| Gln | Leu | Gly | Ala | Gly | Gln | Leu | Ser | Leu | Tyr | Asn | Ile | Leu | Lys | Ala | Tyr |
| | 690 | | | 695 | | | | 700 | | | | | | | |
| Ser | Leu | Leu | Asp | Gln | Glu | Val | Gly | Tyr | Cys | Gln | Gly | Leu | Ser | Phe | Val |
| 705 | | | 710 | | | | | 715 | | | | | | 720 | |
| Ala | Gly | Ile | Leu | Leu | His | Met | Ser | Glu | Glu | Glu | Ala | Phe | Lys | Met | |
| | | 725 | | | | 730 | | | | | | 735 | | | |
| Leu | Lys | Phe | Leu | Met | Phe | Asp | Met | Gly | Leu | Arg | Lys | Gln | Tyr | Arg | Pro |
| | 740 | | | | | 745 | | | | | 750 | | | | |
| Asp | Met | Ile | Ile | Leu | Gln | Ile | Gln | Met | Tyr | Gln | Leu | Ser | Arg | Leu | Leu |
| | 755 | | | 760 | | | | 765 | | | | | | | |
| His | Asp | Tyr | His | Arg | Asp | Leu | Tyr | Asn | His | Leu | Glu | Glu | His | Glu | Ile |
| | 770 | | | 775 | | | | 780 | | | | | | | |
| Gly | Pro | Ser | Leu | Tyr | Ala | Ala | Pro | Trp | Phe | Leu | Thr | Met | Phe | Ala | Ser |
| 785 | | | 790 | | | | | 795 | | | | | | 800 | |
| Gln | Phe | Pro | Leu | Gly | Phe | Val | Ala | Arg | Val | Phe | Asp | Met | Ile | Phe | Leu |
| | | 805 | | | | 810 | | | | | | | 815 | | |
| Gln | Gly | Thr | Glu | Val | Ile | Phe | Lys | Val | Ala | Leu | Ser | Leu | Leu | Gly | Ser |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| 820 | | | | | | | 825 | | | | | 830 | | | | |
| His | Lys | Pro | Leu | Ile | Leu | Gln | His | Glu | Asn | Leu | Glu | Thr | Ile | Val | Asp | |
| 835 | | | | | | | 840 | | | | | 845 | | | | |
| Phe | Ile | Lys | Ser | Thr | Leu | Pro | Asn | Leu | Gly | Leu | Val | Gln | Met | Glu | Lys | |
| 850 | | | | | | | 855 | | | | | 860 | | | | |
| Thr | Ile | Asn | Gln | Val | Phe | Glu | Met | Asp | Ile | Ala | Lys | Gln | Leu | Gln | Ala | |
| 865 | | | | | | | 870 | | | | | 875 | | | | |
| Tyr | Glu | Val | Glu | Tyr | His | Val | Leu | Gln | Glu | Glu | Leu | Ile | Asp | Ser | Ser | |
| 885 | | | | | | | 890 | | | | | 895 | | | | |
| Pro | Leu | Ser | Asp | Asn | Gln | Arg | Met | Asp | Lys | Leu | Glu | Lys | Thr | Asn | Ser | |
| 900 | | | | | | | 905 | | | | | 910 | | | | |
| Ser | Leu | Arg | Lys | Gln | Asn | Leu | Asp | Leu | Leu | Glu | Gln | Leu | Gln | Val | Ala | |
| 915 | | | | | | | 920 | | | | | 925 | | | | |
| Asn | Gly | Arg | Ile | Gln | Ser | Leu | Glu | Ala | Thr | Ile | Glu | Lys | Leu | Leu | Ser | |
| 930 | | | | | | | 935 | | | | | 940 | | | | |
| Ser | Glu | Ser | Lys | Leu | Lys | Gln | Ala | Met | Leu | Thr | Leu | Glu | Leu | Glu | Arg | |
| 945 | | | | | | | 950 | | | | | 955 | | | | |
| Ser | Pro | Ala | Ala | Asp | Gly | Gly | Gly | Ala | Ala | Ala | Ala | Glu | Arg | Arg | Ala | |
| 965 | | | | | | | 970 | | | | | 975 | | | | |
| Gln | Arg | Pro | Gly | Ala | | | | | | | | | | | | |
| 980 | | | | | | | | | | | | | | | | |

```
<210> 5919
<211> 1320
<212> DNA
<213> Homo sapiens
```

```
<400> 5919
ggctgctgca tcttctccgc gctatggctg cgttcggccg tcaggaaatt aaagagggtg
60
ctttactgtt gccctgaaat tttcaccatg cgccagcagg acattaacga cactgtcagg
120
ctttctcaagg agaagtgcct tttcacggta cagcaagtca ccaagatttt gcacagttgc
180
ccctctgttc ttogagagga cctgggtcaa ctggaataca agtttcagca gcctcgtctt
240
acagcgtgac tgcaaagaaa aagacttttg ttttgcaaaa gaaaagcagc tcggtgactc
300
cgtccacatc gccacagttg agtcagatgg cagtggcagt cctttgccag tggaaggagt
360
tcctgctaag gggaggtgca ggaggactaa tttattattg tgcaactgcc agtcctgcgc
420
attccagcta cgctaagcgc cctgcccagg cacgtaacaa aacatagacc tgttttgaag
480
tggtctgtta cccaagggtg cctcactcat ctgcgccacc aggaagatga actgtgaggg
540
ctcctataag gggcaggaag agcaaagctg tcctaggcca accagagatt catctttcat
600
gcagtgacat gttgataaaa aatgatggtc agtatgaaac tggtaacagg ttgtagatgg
660
ctttctatgg tatatcccag tctcttgcaa acgatttgtga agaatgccag tgttgtttaa
720
gattcggcag tttgtgtggg gaggtggggg caggatgggg tttggttgcc aaaagagttt
780
```

gggaaatgct ggcttaaaca aaggcgagag gaagtccctt tcacgtcagg atttatgaat
 840
 gcctatgagc ccagtgtcag tgacgacttt ctagcggcgg tcttcaacac tttctaaata
 900
 ttaagcgatc aaggccccctg ccccaactttt agttccaaca gaatgccgtt cacaagatct
 960
 gggaggcact ctctcagccc tctcctggag cccccggaat ttctcagcag cccaggccct
 1020
 cccgctgccc gtggccccctc ctcccagggtg ccagggtggc ttccagcctc tccaagggcc
 1080
 cccccccctg cctcttctc ccaactgcagc tgatctaggg gtttcttggc cacatttccc
 1140
 ttgagagaga gtgggatttg ccctatccac agagagcctc atttccacct gaagggtgat
 1200
 ttgtcagtgg ctagaccagg ttcattgtctg tttccccttg gggacttctg aaccttctg
 1260
 cccgggagtc tgtaaacagc agcacaggac cgcgcttcc ttagcagtgc tgagtaagca
 1320

<210> 5920

<211> 93

<212> PRT

<213> Homo sapiens

<400> 5920

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Leu | Ser | Val | Asp | Arg | Ala | Asn | Pro | Thr | Leu | Ser | Gln | Gly | Lys |
| 1 | | | 5 | | | | | | 10 | | | | | 15 | |
| Cys | Gly | Gln | Glu | Thr | Pro | Arg | Ser | Ala | Ala | Val | Gly | Gly | Arg | Gly | Arg |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Gly | Val | Gly | Pro | Trp | Arg | Gly | Trp | Lys | Thr | Thr | Trp | His | Leu | Gly | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Ala | Thr | Gly | Ser | Gly | Arg | Ala | Trp | Ala | Ala | Glu | Lys | Phe | Arg | Gly |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Gln | Glu | Arg | Ala | Glu | Arg | Val | Pro | Pro | Arg | Ser | Cys | Glu | Arg | His |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Ser | Val | Gly | Thr | Lys | Ser | Gly | Ala | Gly | Ala | Leu | Ile | Ala | | | |
| | | | | 85 | | | | | 90 | | | | | | |

<210> 5921

<211> 4130

<212> DNA

<213> Homo sapiens

<400> 5921

nncaccttac ttcagccccct caaggacac aaagacactg tgtactgtgt ggcataatgcg
 60
 aaggatggca agcgctttgc ttctggatca gctgacaaaa gcgttattat ctggacatca
 120
 aaactggaag gcattctgaa gtacacgcac aatgatgcta tacaatgtgt ctctacaat
 180
 cctattactc atcaactggc atcttgttcc tccagtgact ttgggttgtg gtctcctgaa
 240
 cagaagtctg tctccaaaca caaatcaagc agcaagatca tctgctgcag ctggacaaat
 300

gatggtcagt acctggcgct ggggatgttc aatgggatca tcagcatatcg gaacaaaaat
360
ggcgaggaga aagtaaagat cgagcgggccg gggggctccc tctcgccaat atgggccatc
420
tgctggaacc cttcaagccg atgggagagt ttctggatga acagagagaa tgaggatgcc
480
gaggatgtca ttgtcaacag atatattcag gaaatccctt ccactctgaa gtcagcagtg
540
tacagtagtc agggtagtga ggcagaggag gaagaaccag aggaagagga cgacagtccc
600
agggacgaca acttagagga acgtaatgac atcctggctg tggctgactg gggacagaaa
660
gtttccttct accagctgag tggaaaacag attggaaagg atcgggcact gaactttgac
720
ccctgctgca tcagctactt tactaaaggc gagtacattt tgctggggggg ttcagacaag
780
caagtttctc ttttcaccaa ggatggagtg cggcttggga ctgttgggga gcagaactcc
840
tgggtgtgga cgtgtcaagc gaaaccggat tccaactatg tgggtggtcg ctgccaggac
900
ggcaccattt ccttctacca gcttattttc agcacagtcc atgggcttta caaggaccgc
960
tatgcctaca gggatagcat gactgacgtc attgtgcagc acctgatcac tgagcagaaa
1020
gttcggatta aatgcaaaga gcttgtcaag aagattgcc a tctacagaaa tcgattggct
1080
atccaactgc cagagaaaaat cctcatctat gagttgtatt cagaggactt atcagacatg
1140
cattaccggg taaaggagaa gattatcaag aagtttgagt gcaacctcct ggtggtgtgt
1200
gccaatcaca tcatcctgtg ccaggagaaa cggctgcagt gcctgtcctt cagcggagtg
1260
aaggagcggg agtggcagat ggagtctctc attcgttaca tcaaggatgat cgggtggcct
1320
cctggaagag aaggcctctt agtggggctg aagaatggac agatcctgaa gatcttcgtg
1380
gacaatctct ttgctatcgt cctgctgaag caggccacag ctgtgcgctg cttggacatg
1440
agtgcctccc gtaagaagct ggccgtggta gatgaaaatg acacttgctt ggtgtatgac
1500
atcgacacca aggagctgct ttttcaggaa ccaaacgcca acagtgtagc ttggaacacc
1560
cagtgtgagg acatgctctg cttctcgga ggaggctacc tcaacatcaa agccagcacc
1620
ttcctgtgc accggcagaa gctgcagggc tttgtggtcg gctacaatgg ctccaagatc
1680
ttctgcctcc atgtcttctc ctttctgccc gtggaggtgc cgcagtccgc tcccatgtac
1740
cagtacctgg ataggaaact gttcaaggaa gcctaccaga ttgcttgctt ggggtgcaca
1800
gacactgatt ggcgtaact ggccatggaa gcgctagaag gtttagattt tgaaacagca
1860
aagaaggcct tcatcagagt acaagacctc cgatatttag agctcatcag cagcattgag
1920

gagaggaaga agcggggaga gaccaacaat gacctgtttc tggcagatgt gttttcctac
 1980
 caggggaagt tccatgaggc cgccaaactg tacaagagga gtgggcacga gaacctcgcg
 2040
 cttgaaatgt acaccgacct ctgcatgttt gagtatgcca aggatttcct tggatctgga
 2100
 gaccccaaag aaacaaagat gctaatacacc aaacaggctg actggggccag aaatatcaag
 2160
 gagcccaaag ccgccgtgga gatgtacatc tcagcaggag agcacgtcaa ggccatcgag
 2220
 atctgtggtg accatggctg ggttgacatg ttgatcgaca tcgcccgcaa actggacaag
 2280
 gctgagcgcg agcccctgct gctgtgcgct acctacctca agaagctgga cagccctggc
 2340
 tatgtgctg agacctacct gaagatgggt gacctcaagt ccctggtgca gctgcacgtg
 2400
 gagaccagc gctgggatga ggcctttgct ttgggtgaga agcatcctga gtttaaggat
 2460
 gacatctaca tgccgtatgc tcagtggcta gcagagaacg atcgctttga ggaagcccag
 2520
 aaagcgttcc acaaggctgg gcgacagaga gaagcgggcc aggtgctgga gcagctcaca
 2580
 aacaatgccg tggcggagag caggtttaat gatgctgcct attattactg gatgctgtcc
 2640
 atgcagtgcc tcgatatagc tcaagcagat cctgcccaga aggacacaat gcttggcaag
 2700
 ttctaccact tccagcgttt ggcagagctg taccatgggt accatgccat ccacgccac
 2760
 acggaagatc cgttcagtgt ccacgtcct gaaactcttt tcaacatctc caggttcctg
 2820
 ctgcacagcc tgcccaagga caccctctg ggcacatcta aagtgaataa actcttcacc
 2880
 ttggccaagc agagcaaggc cctcggtgcc tacaggctgg ccggcacgc ctatgacaag
 2940
 ctgcgtggcc tgtacatccc tgccagattc caaaagtcca ttgagctggg taccctgacc
 3000
 atccgcgcca agcccttcca cgacagtga gagttggtgc ccttggtgta ccgctgtccc
 3060
 accaacaacc cgctgctcaa caacctgggc aacgtctgca tcaactgccg ccagcccttc
 3120
 atcttctccg cctcttctta cgacgtgcta cacctgggtg agttctacct ggaggaaggg
 3180
 atcactgatg aagaagccat ctccctcatc gacctggagg tgctgagacc caagcgggat
 3240
 gacagacagc tagagattgc aaacaacagc tcccagattc tgccgctagt ggagaccaag
 3300
 gactccatcg gagatgagga cccgttcaca gctaagctga gctttgagca aggtgggtca
 3360
 gagttcgtgc cagtgggtgg gagccggctg gtgctgcgct ccatgagccg ccgggatgtc
 3420
 ctcatcaagc gatggcccc acccctgagg tggcaatact tccgctcact gctgcctgac
 3480
 gctccatta ccattgtccc ctctgtctc caggtagggt gccaccctgg tagctcacat
 3540

gtgcttctct tggccacttt tcccttgccc aaatgtccct ctgggaggcg gggccccctgg
 3600
 gagggagggg cacatccatg gctccaagtt gggacagagg cttgtctgtc ctctccccctg
 3660
 cttgcattcc atgtgcatct aaagtggact tcaactggccc ctgcgctgtc cacatcctcc
 3720
 ccaaatacctg gggggcccagc aagcgtgatg tgcccttgac cttcactcag aaaacaagaa
 3780
 accccacagc cccctcccat ctcccccttc agccctcaaa caaagggtgct gcagggtctgt
 3840
 gtccagccct gaccactgcc aagccccctc cccttgagag gcagtgcgtc ctggccccag
 3900
 gcgtagggtc gatgagcact agggcttcag cctgggtctta cagctgtctt cccttagatg
 3960
 ttccattctg aggactatga gttgctggtg cttcagcatg gctgctgccc ctactgccgc
 4020
 aggtgcaagg atgaccctgg cccatgacca gcatactggg gacggcctgc accctctgcc
 4080
 cgccttgggg tctgctgggc tgtgaaggag aataaagagt taaactgtca
 4130

<210> 5922

<211> 1252

<212> PRT

<213> Homo sapiens

<400> 5922

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Thr | Leu | Leu | Gln | Pro | Leu | Lys | Gly | His | Lys | Asp | Thr | Val | Tyr | Cys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Ala | Tyr | Ala | Lys | Asp | Gly | Lys | Arg | Phe | Ala | Ser | Gly | Ser | Ala | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Lys | Ser | Val | Ile | Ile | Trp | Thr | Ser | Lys | Leu | Glu | Gly | Ile | Leu | Lys | Tyr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Thr | His | Asn | Asp | Ala | Ile | Gln | Cys | Val | Ser | Tyr | Asn | Pro | Ile | Thr | His |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Gln | Leu | Ala | Ser | Cys | Ser | Ser | Ser | Asp | Phe | Gly | Leu | Trp | Ser | Pro | Glu |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Gln | Lys | Ser | Val | Ser | Lys | His | Lys | Ser | Ser | Ser | Lys | Ile | Ile | Cys | Cys |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Ser | Trp | Thr | Asn | Asp | Gly | Gln | Tyr | Leu | Ala | Leu | Gly | Met | Phe | Asn | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ile | Ile | Ser | Ile | Arg | Asn | Lys | Asn | Gly | Glu | Glu | Lys | Val | Lys | Ile | Glu |
| | | 115 | | | | 120 | | | | | | 125 | | | |
| Arg | Pro | Gly | Gly | Ser | Leu | Ser | Pro | Ile | Trp | Ser | Ile | Cys | Trp | Asn | Pro |
| | 130 | | | | 135 | | | | | | 140 | | | | |
| Ser | Ser | Arg | Trp | Glu | Ser | Phe | Trp | Met | Asn | Arg | Glu | Asn | Glu | Asp | Ala |
| 145 | | | | 150 | | | | | 155 | | | | | 160 | |
| Glu | Asp | Val | Ile | Val | Asn | Arg | Tyr | Ile | Gln | Glu | Ile | Pro | Ser | Thr | Leu |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Lys | Ser | Ala | Val | Tyr | Ser | Ser | Gln | Gly | Ser | Glu | Ala | Glu | Glu | Glu | Glu |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Pro | Glu | Glu | Glu | Asp | Asp | Ser | Pro | Arg | Asp | Asp | Asn | Leu | Glu | Glu | Arg |
| | 195 | | | | | 200 | | | | | 205 | | | | |
| Asn | Asp | Ile | Leu | Ala | Val | Ala | Asp | Trp | Gly | Gln | Lys | Val | Ser | Phe | Tyr |

| | | | | |
|---|---|-------------------------|-----|-----|
| 210 | | 215 | | 220 |
| Gln Leu Ser Gly Lys | Gln Ile Gly Lys Asp | Arg Ala Leu Asn Phe Asp | | |
| 225 | 230 | 235 | 240 | |
| Pro Cys Cys Ile Ser | Phe Thr Lys Gly Glu Tyr Ile Leu Leu Gly | | | |
| | 245 | 250 | 255 | |
| Gly Ser Asp Lys Gln Val Ser Leu Phe Thr Lys Asp Gly Val Arg Leu | | | | |
| | 260 | 265 | 270 | |
| Gly Thr Val Gly Glu Gln Asn Ser Trp Val Trp Thr Cys Gln Ala Lys | | | | |
| | 275 | 280 | 285 | |
| Pro Asp Ser Asn Tyr Val Val Gly Cys Gln Asp Gly Thr Ile Ser | | | | |
| | 290 | 295 | 300 | |
| Phe Tyr Gln Leu Ile Phe Ser Thr Val His Gly Leu Tyr Lys Asp Arg | | | | |
| 305 | 310 | 315 | 320 | |
| Tyr Ala Tyr Arg Asp Ser Met Thr Asp Val Ile Val Gln His Leu Ile | | | | |
| | 325 | 330 | 335 | |
| Thr Glu Gln Lys Val Arg Ile Lys Cys Lys Glu Leu Val Lys Lys Ile | | | | |
| | 340 | 345 | 350 | |
| Ala Ile Tyr Arg Asn Arg Leu Ala Ile Gln Leu Pro Glu Lys Ile Leu | | | | |
| | 355 | 360 | 365 | |
| Ile Tyr Glu Leu Tyr Ser Glu Asp Leu Ser Asp Met His Tyr Arg Val | | | | |
| | 370 | 375 | 380 | |
| Lys Glu Lys Ile Ile Lys Lys Phe Glu Cys Asn Leu Leu Val Val Cys | | | | |
| 385 | 390 | 395 | 400 | |
| Ala Asn His Ile Ile Leu Cys Gln Glu Lys Arg Leu Gln Cys Leu Ser | | | | |
| | 405 | 410 | 415 | |
| Phe Ser Gly Val Lys Glu Arg Glu Trp Gln Met Glu Ser Leu Ile Arg | | | | |
| | 420 | 425 | 430 | |
| Tyr Ile Lys Val Ile Gly Gly Pro Pro Gly Arg Glu Gly Leu Leu Val | | | | |
| | 435 | 440 | 445 | |
| Gly Leu Lys Asn Gly Gln Ile Leu Lys Ile Phe Val Asp Asn Leu Phe | | | | |
| | 450 | 455 | 460 | |
| Ala Ile Val Leu Leu Lys Gln Ala Thr Ala Val Arg Cys Leu Asp Met | | | | |
| 465 | 470 | 475 | 480 | |
| Ser Ala Ser Arg Lys Lys Leu Ala Val Val Asp Glu Asn Asp Thr Cys | | | | |
| | 485 | 490 | 495 | |
| Leu Val Tyr Asp Ile Asp Thr Lys Glu Leu Leu Phe Gln Glu Pro Asn | | | | |
| | 500 | 505 | 510 | |
| Ala Asn Ser Val Ala Trp Asn Thr Gln Cys Glu Asp Met Leu Cys Phe | | | | |
| | 515 | 520 | 525 | |
| Ser Gly Gly Gly Tyr Leu Asn Ile Lys Ala Ser Thr Phe Pro Val His | | | | |
| | 530 | 535 | 540 | |
| Arg Gln Lys Leu Gln Gly Phe Val Val Gly Tyr Asn Gly Ser Lys Ile | | | | |
| 545 | 550 | 555 | 560 | |
| Phe Cys Leu His Val Phe Ser Ile Ser Ala Val Glu Val Pro Gln Ser | | | | |
| | 565 | 570 | 575 | |
| Ala Pro Met Tyr Gln Tyr Leu Asp Arg Lys Leu Phe Lys Glu Ala Tyr | | | | |
| | 580 | 585 | 590 | |
| Gln Ile Ala Cys Leu Gly Val Thr Asp Thr Asp Trp Arg Glu Leu Ala | | | | |
| | 595 | 600 | 605 | |
| Met Glu Ala Leu Glu Gly Leu Asp Phe Glu Thr Ala Lys Lys Ala Phe | | | | |
| | 610 | 615 | 620 | |
| Ile Arg Val Gln Asp Leu Arg Tyr Leu Glu Leu Ile Ser Ser Ile Glu | | | | |
| 625 | 630 | 635 | 640 | |
| Glu Arg Lys Lys Arg Gly Glu Thr Asn Asn Asp Leu Phe Leu Ala Asp | | | | |

5103

| | | |
|---|------|------|
| 1075 | 1080 | 1085 |
| Asn Ser Ser Gln Ile Leu Arg Leu Val Glu Thr Lys Asp Ser Ile Gly | | |
| 1090 | 1095 | 1100 |
| Asp Glu Asp Pro Phe Thr Ala Lys Leu Ser Phe Glu Gln Gly Gly Ser | | |
| 1105 | 1110 | 1115 |
| Glu Phe Val Pro Val Val Val Ser Arg Leu Val Leu Arg Ser Met Ser | | |
| 1125 | 1130 | 1135 |
| Arg Arg Asp Val Leu Ile Lys Arg Trp Pro Pro Pro Leu Arg Trp Gln | | |
| 1140 | 1145 | 1150 |
| Tyr Phe Arg Ser Leu Leu Pro Asp Ala Ser Ile Thr Met Cys Pro Ser | | |
| 1155 | 1160 | 1165 |
| Cys Phe Gln Val Gly Gly His Pro Gly Ser Ser His Val Leu Leu Leu | | |
| 1170 | 1175 | 1180 |
| Ala Thr Phe Pro Leu Pro Lys Cys Pro Ser Gly Arg Arg Gly Pro Trp | | |
| 1185 | 1190 | 1195 |
| Glu Gly Gly Ala His Pro Trp Leu Gln Val Gly Thr Glu Ala Cys Leu | | |
| 1205 | 1210 | 1215 |
| Ser Ser Pro Leu Leu Ala Phe His Val His Leu Lys Trp Thr Ser Leu | | |
| 1220 | 1225 | 1230 |
| Ala Pro Ala Leu Ser Thr Ser Ser Pro Asn Pro Gly Gly Pro Ala Ser | | |
| 1235 | 1240 | 1245 |
| Val Met Cys Pro | | |
| 1250 | | |

<210> 5923

<211> 1989

<212> DNA

<213> Homo sapiens

<400> 5923

```

gggccccgcg aaggtccccg gccgtgcgcg aggcagcatg atgaggcgca ccctggaaaa
60
ccggaacgct caaacgaaac aactgcaaac agctgtctca aatgtggaga agcattttgg
120
agaactgtgc caaatcttcg ctgcctatgt gcggaaaact gccaggctga gagacaaagc
180
agacctctg gtgaatgaaa ttaacgcgta tgctgtctaca gagacccccg atttaaagct
240
gggcctgatg aactttgcag atgagtttgc caaacttcag gattatcgac aagcagaggt
300
tgaaagactt gaagcccaa aaggttgaaa gacttgaagc caaagtagtt gaacccttga
360
aaacttatgg gaccattgtg aaaatgaaac gggatgacct caaagcaaca ctacagcaa
420
ggaatcgaga agctaagcaa ttaactcagt tagaaagaac acgtcagcga aacccatctg
480
atcgacatgt tattgtatcc tttgaatttg ggtctttaa aaaatgttta aggcagaaa
540
ggaattacag agagctgcaa tggatgctag ccgaacaagt cgtcatctgg aggaaactat
600
taacaacttt gaaaggcaga aaatgaagga tataaagact atattttctg aatttatcac
660
aatcgaaatg ttatttcacg gcaaagcttt agaggtctac actgctgcct accagaatat
720

```

acaaaacatt gatgaagatg aagatttaga ggttttccga aattctctgt atgcaccaga
 780
 ttattcatct cgtttagata ttgtaagagc aaattcaaag tcacctcttc agagatcact
 840
 gtcagctaag tgtgtatctg gaacaggaca ggtatccact tgtcgactaa gaaaggatca
 900
 acaagcagaa gatgatgagg atgacgagtt agatgttaca gaagaagaaa attttcttaa
 960
 gtaaactaca catttccatt ttcatacata atgacttgaa atccacaatg actaaattgt
 1020
 agaactttat actcactttg ctatgttaag cctcaaagtg aagtccaact ggaaacagaa
 1080
 aaataattaa aggaaactta tgctgaccaa aaatgaaggc tttaaaaaat attgcatacc
 1140
 agtcatttca acatcctacc tagtgttaca tgatttttgt gtaagtgcct ttttttttaa
 1200
 agatgggtgta tttcaaagta tttcatatta atgtactata tctacttgaa gttccaatag
 1260
 tacattatga cagaaaccaa aagatctaac aattctgctt agcttttttg ttaagactcc
 1320
 atgctttcat taccagaaaa gggctttacg tagtcattat gattcatgga attctattcc
 1380
 atgaagcctt aagaaaaaaa acttttttta actttccctg aaactttatc atttgataag
 1440
 taaatttact tttcaagaag agtataacca aagagtaaag ataatgtgac actaagttat
 1500
 caatgtttta tgaatacaca taaggcataa atttcagctg taaaaaagct acattcaatc
 1560
 tgactctggt tttaaaacaa aactgctgtc ataattatac atgatactgc aacttttgga
 1620
 aggctaattt ggtggaatgt tgctcatca tagaacacca tagatcatta aaaattctat
 1680
 aaaaatttta ccaagctacc atatagttaa taaaagggtta tacagtcact tttatttctg
 1740
 aaaatataaa acattgagcc tttcagtgtg tctgatgctt ctcttttggt aaggaatact
 1800
 tttatttcat ggatcccagg caggcatata aaagttacgg aatttataaa atcatttggg
 1860
 ataattagaa aatgcaatta ttcataacag aaaaataaag acttttctaga aagcttctga
 1920
 ctttgtcaat catggctctg ttcttaacaa agcactcctt cctgagaata gtcctaagtg
 1980
 acaaagttg
 1989

<210> 5924

<211> 146

<212> PRT

<213> Homo sapiens

<400> 5924

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Phe | Lys | Ala | Glu | Thr | Glu | Leu | Gln | Arg | Ala | Ala | Met | Asp | Ala | Ser |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Arg | Thr | Ser | Arg | His | Leu | Glu | Glu | Thr | Ile | Asn | Asn | Phe | Glu | Arg | Gln |

| | | | | | |
|---|----|-----|----|-----|----|
| | 20 | | 25 | | 30 |
| Lys Met Lys Asp Ile Lys Thr Ile Phe Ser Glu Phe Ile Thr Ile Glu | | | | | |
| 35 | | 40 | | 45 | |
| Met Leu Phe His Gly Lys Ala Leu Glu Val Tyr Thr Ala Ala Tyr Gln | | | | | |
| 50 | | 55 | | 60 | |
| Asn Ile Gln Asn Ile Asp Glu Asp Glu Asp Leu Glu Val Phe Arg Asn | | | | | |
| 65 | | 70 | | 75 | 80 |
| Ser Leu Tyr Ala Pro Asp Tyr Ser Ser Arg Leu Asp Ile Val Arg Ala | | | | | |
| | 85 | | 90 | | 95 |
| Asn Ser Lys Ser Pro Leu Gln Arg Ser Leu Ser Ala Lys Cys Val Ser | | | | | |
| 100 | | 105 | | 110 | |
| Gly Thr Gly Gln Val Ser Thr Cys Arg Leu Arg Lys Asp Gln Gln Ala | | | | | |
| 115 | | 120 | | 125 | |
| Glu Asp Asp Glu Asp Asp Glu Leu Asp Val Thr Glu Glu Glu Asn Phe | | | | | |
| 130 | | 135 | | 140 | |
| Leu Lys | | | | | |
| 145 | | | | | |

<210> 5925

<211> 4538

<212> DNA

<213> Homo sapiens

<400> 5925

gctagccagc tgtgtgaggg ccgttgccctt atctgagctc tgagttatatt agtttttaatt
 60
 ggaaacaaga ccccccgcaga cagcaggaa aacacaaatc cctatcagat cagcagccat
 120
 ggacgtggag acgtggccctt tgtccctctg tcccagcgcc cggcctgtgt agttggactt
 180
 ggcagtgtgc agcgtagaa aggaattgtc tgaccccagc attgcttcct ggctcctttc
 240
 ttccctttttc aggagagcat cctgccgacc acagccctcc ccactgtgag ccttcctgac
 300
 agcctcatcg cgccccctac cgccccatcc ctggctcaca tggatgagca gggctgtgaa
 360
 cacacctccc ggactgagga ccggtttatc cagcccacgg acttcgggtcc ctgagagccg
 420
 ccactgagtg tcccgcagcc cttcctccct gtcttcacca tgcccctgct gtctcccagc
 480
 cccgccccac cgcccatctc ccccggttta ccattagttc ctctcctgc cactgccctg
 540
 aaccccccggt ctcacccac cttccatcag ccacagaagt ttgctggagt caacaaagcg
 600
 ccgtctgtca tcaccacac ggctctgtgc accctcacc acgatcccc cgccaccacc
 660
 tttagccaga gtcagggcct tgtgatcacc accatcacc ctgcccctgc agcggccctt
 720
 tgtgggctgg cactgtctcc tgtcaccgg cctcccagc caggttaac ttttgtgcac
 780
 cccaaacctg tatecttgac tgggggcagg cctaagcag cccacaaaat agtgccctgt
 840
 cccaaaccag agcccgtgtc cttggtgttg aagaatgcc gtatcgcccc agctgccttt
 900

tcaggccaac cacaagcggg gatcatgacg tcagggcctc tgaagagaga agggatgttg
960
gcctccaccg tgtcccagtc caacgtgggc attgcgcctg ctgccatcgc cagggtcctc
1020
gggggtcccg agttccacag cagcatcctg gtgacagatc tcggccatgg cacgagcagc
1080
ccgcctgccc ccgtctcccg gctcttccca agcacagcgc aagacccctt ggggaagggc
1140
gagcaggtcc cgctgcatgg gggcagcccc cagggtcactg tcacagggcc cagtcgggac
1200
tgcccaaact cagggcaggc ctctccgtgt gcatcggagc agagccccag tcctcaatct
1260
ccccagaaca actgctcagg gaaatccgac cccaaaaatg tggctgcact aaagaaccgg
1320
cagatgaagc acatctcagc tgagcagaaa aggcgcttca acatcaagat gtgcttcgac
1380
atgtcaaca gcctcatctc caacaattcc aagctgacca gtcacgccat cacactgcag
1440
aagactgtgg agtacatcac caagctgcag caggagagag gccagatgca ggaggaggcc
1500
cggcggtgc gggaggagat cgaggagctc aatgccacca tcatctcctg ccagcagctg
1560
ctcctgcca cgggagtccc cgttaccggg cgccagtgtg atcacatgaa agacatgttt
1620
gacgaatacg tgaaaaccgg gaccttgagc aattggaagt tctggatttt cagcatcatc
1680
atcaagccgc tgtttgagtc gttcaagggc atggtgtcca ccagcagcct ggaggagctg
1740
caccggacgg cgctctcctg gctggaccag cactgctccc tgcccatcct caggccgatg
1800
gtattgagca cgctgcggca gctgagcacc tccacctcca tcctcacaga cccggcacag
1860
ctgccagagc aggcgtccaa ggctgtcacc aggattggca agagattggg agagtcctag
1920
ctgcttagct ggcatgtggc cgcatgagat gccaggagac ccttccctgc ccatggagag
1980
taggctgcgc cccccagccc ttctgacgc tcagcctcgg ggctctctc caactctgcc
2040
ggcccaccgt ggcatcggga ggccatgctc aggtctgaag caggtttggg gcctgctgac
2100
agcaatagcc cgcctttggg aacccttgc tgtgaactct ctactcagt gacctcagtc
2160
accaacctcc tctgcctcgg gggcagcccc cacaaaaggg aagtgtcggc cgtgctggtc
2220
ctgcctgct ggtggcctgc cgggcctggc gccggtgagc ggaatcgatg ggatgagggt
2280
gacagggcct gctcctgtcc tgaggcccag ccttgctcct cctgccacgt cctgtccaca
2340
tgcatgcctc tgectgatgc cctgctccac tctctggtct gcccggtggg cagttggaag
2400
gcgtctttcc ttctccctcc aactctgaca gcaccagcc cttgtggatg gacttgggct
2460
tctattcagg cttatgcatg gcaggctgcc agggggaagt gccttcttca gaggtcctcc
2520

aggacacatg tgtgcagaaa cgggtggatgt ggaacacaca ggaccagaat ggaagcgtgt
2580
gatgcacggt ggctgctctg gctgagaggg cctgctgggc atgtttcatc tgtccccttt
2640
tagctccacc tgacattgca ggatccatgg ggactcagcc cagggccttc tcggatgtca
2700
cctcaccgct gtggcccttc tgccgttctt ctccacttgg ctccagctgc agctgttgac
2760
agatcaagca tgtcctgtgg gagcttagaa ccctgaagtt ctagtgtctg aaagatcaga
2820
ctccacgtcc tgctgtcagc cttgtcatct tgtctgatgt ctttcagctg ggagccccc
2880
accaggacag ttctcggacc aaagatgccc ccacactcaa aagtctgtcc cgtcttgtgt
2940
ttggagaagg aaacaatgtt ggcaggcagc actctgtggg ggtcagccct cagagctgtt
3000
tctaggcatc tctcagatca gacagcaaag aatctacca gatctgggct ggggtggagg
3060
gtggctgggc tggggggccat tctgagcctg cagtgtgagt ttggcccagc ctcagtcctt
3120
gctcttctct ggctacctct gcaggagct gcaggggcaa gcactctctc cagcactcag
3180
gaagcccggc cgagggtacc tcctcgtgga aagaatgcac tttaaagctc tgcgtaggag
3240
ttcggagccc aggttttcag gcgacctctg ccctccctgc ctctcctcac cctccctctc
3300
ttcctgcagg gcctgggaag ggctttgagg gagcctggga gccatgtgaa gagggggcag
3360
cctgggctgt cccacagttt agatccagtt ggagggttct cctggctcct gcaggcctgc
3420
ggggatctct cccacttca ggccctcggc cagctgcctg ccctcttgct tgtgcttcag
3480
ccctgcacaa aagcagcttg gtgacaccac tcagccaccc agagtacgtg ttacaggct
3540
ttccagatca ccttctctgt ggggtgaacgt aatgaggcgg ggctggctcct tggaaattcc
3600
cctggaaaat ggtaacagac tccatccttg acccggggat gagcatgaag gcattgtccc
3660
aaaggcagag gccaccgtgg taggaattcc accaaggcca gaagggaaaa aggaagaacc
3720
caccgtgtct ggctgtgcgg gccctgggga gggctcgtgag tgcagcccct ctctacttcc
3780
gtgcctttgt aaaacgtgta gataaccgca gtgggttggt gagccaagaa ctctcctaaa
3840
tcagtggctt tctccccacc ccttgctggg gagtcatttt taaaaaatc tgtgggatat
3900
aaaattggcc tcctgtctct tcagcctacc tctccctctg ctgacttaat gtcgtgattc
3960
tgtttcttca gatatttaag gctgttaggt tgtgtgagcc ttgaagtgtg tgtgtgtgtc
4020
ccagcgactg tccactgtcc aggagatgca tgtctttgta ttggagatat ttctgtaact
4080
cattctcttg gtgctcacga ttgccatggc catagggcca cagtgccgta tctgctgcag
4140

acatgattgt ttcttgttct agaggttttc ttgttttcga atcttgcttg atgaatccag
 4200
 ccagaccaag gggcctagat ttgacctctg tcttgggctc ctggggccagg tgcaggaaca
 4260
 tctgaggcca ctctgctggc cacctccagt gggtgctgac cacaggatgg gctttgttta
 4320
 cactcatttt caccctgatt cttgccccca ctttcataaa agaaacttca aaatgctgac
 4380
 gctttggaga gtaagaaaat caatcttggc tgggcacggt ggctcctgcc tgtgatccta
 4440
 gcactttggg aggctgaagc tgaaggatca cttgagctca ggagttggag accaaccctg
 4500
 gcaacataac aagaccctgt ctctacaaaa aaaaaaaaa
 4538

<210> 5926

<211> 526

<212> PRT

<213> Homo sapiens

<400> 5926

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Glu | Gln | Gly | Cys | Glu | His | Thr | Ser | Arg | Thr | Glu | Asp | Pro | Phe |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ile | Gln | Pro | Thr | Asp | Phe | Gly | Pro | Ser | Glu | Pro | Pro | Leu | Ser | Val | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Pro | Phe | Leu | Pro | Val | Phe | Thr | Met | Pro | Leu | Leu | Ser | Pro | Ser | Pro |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Pro | Pro | Pro | Ile | Ser | Pro | Val | Leu | Pro | Leu | Val | Pro | Pro | Pro | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Thr | Ala | Leu | Asn | Pro | Pro | Ala | Pro | Pro | Thr | Phe | His | Gln | Pro | Gln | Lys |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Phe | Ala | Gly | Val | Asn | Lys | Ala | Pro | Ser | Val | Ile | Thr | His | Thr | Ala | Ser |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ala | Thr | Leu | Thr | His | Asp | Ala | Pro | Ala | Thr | Thr | Phe | Ser | Gln | Ser | Gln |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gly | Leu | Val | Ile | Thr | Thr | His | His | Pro | Ala | Pro | Ser | Ala | Ala | Pro | Cys |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gly | Leu | Ala | Leu | Ser | Pro | Val | Thr | Arg | Pro | Pro | Gln | Pro | Arg | Leu | Thr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Phe | Val | His | Pro | Lys | Pro | Val | Ser | Leu | Thr | Gly | Gly | Arg | Pro | Lys | Gln |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Pro | His | Lys | Ile | Val | Pro | Ala | Pro | Lys | Pro | Glu | Pro | Val | Ser | Leu | Val |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Leu | Lys | Asn | Ala | Arg | Ile | Ala | Pro | Ala | Ala | Phe | Ser | Gly | Gln | Pro | Gln |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Ala | Val | Ile | Met | Thr | Ser | Gly | Pro | Leu | Lys | Arg | Glu | Gly | Met | Leu | Ala |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Ser | Thr | Val | Ser | Gln | Ser | Asn | Val | Val | Ile | Ala | Pro | Ala | Ala | Ile | Ala |
| | 210 | | | | | 215 | | | | | | 220 | | | |
| Arg | Ala | Pro | Gly | Val | Pro | Glu | Phe | His | Ser | Ser | Ile | Leu | Val | Thr | Asp |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Leu | Gly | His | Gly | Thr | Ser | Ser | Pro | Pro | Ala | Pro | Val | Ser | Arg | Leu | Phe |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Pro | Ser | Thr | Ala | Gln | Asp | Pro | Leu | Gly | Lys | Gly | Glu | Gln | Val | Pro | Leu |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | | | 260 | | | | 265 | | | | | 270 | | | |
| His | Gly | Gly | Ser | Pro | Gln | Val | Thr | Val | Thr | Gly | Pro | Ser | Arg | Asp | Cys | |
| | | 275 | | | | | 280 | | | | | 285 | | | | |
| Pro | Asn | Ser | Gly | Gln | Ala | Ser | Pro | Cys | Ala | Ser | Glu | Gln | Ser | Pro | Ser | |
| | 290 | | | | | 295 | | | | | 300 | | | | | |
| Pro | Gln | Ser | Pro | Gln | Asn | Asn | Cys | Ser | Gly | Lys | Ser | Asp | Pro | Lys | Asn | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | |
| Val | Ala | Ala | Leu | Lys | Asn | Arg | Gln | Met | Lys | His | Ile | Ser | Ala | Glu | Gln | |
| | | | | 325 | | | | | 330 | | | | | 335 | | |
| Lys | Arg | Arg | Phe | Asn | Ile | Lys | Met | Cys | Phe | Asp | Met | Leu | Asn | Ser | Leu | |
| | | | 340 | | | | | 345 | | | | 350 | | | | |
| Ile | Ser | Asn | Asn | Ser | Lys | Leu | Thr | Ser | His | Ala | Ile | Thr | Leu | Gln | Lys | |
| | | 355 | | | | | 360 | | | | | 365 | | | | |
| Thr | Val | Glu | Tyr | Ile | Thr | Lys | Leu | Gln | Gln | Glu | Arg | Gly | Gln | Met | Gln | |
| | 370 | | | | | 375 | | | | | 380 | | | | | |
| Glu | Glu | Ala | Arg | Arg | Leu | Arg | Glu | Glu | Ile | Glu | Glu | Leu | Asn | Ala | Thr | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | |
| Ile | Ile | Ser | Cys | Gln | Gln | Leu | Leu | Pro | Ala | Thr | Gly | Val | Pro | Val | Thr | |
| | | | 405 | | | | | | 410 | | | | | 415 | | |
| Arg | Arg | Gln | Phe | Asp | His | Met | Lys | Asp | Met | Phe | Asp | Glu | Tyr | Val | Lys | |
| | | | 420 | | | | | 425 | | | | 430 | | | | |
| Thr | Arg | Thr | Leu | Gln | Asn | Trp | Lys | Phe | Trp | Ile | Phe | Ser | Ile | Ile | Ile | |
| | | 435 | | | | | 440 | | | | | 445 | | | | |
| Lys | Pro | Leu | Phe | Glu | Ser | Phe | Lys | Gly | Met | Val | Ser | Thr | Ser | Ser | Leu | |
| | 450 | | | | | 455 | | | | | 460 | | | | | |
| Glu | Glu | Leu | His | Arg | Thr | Ala | Leu | Ser | Trp | Leu | Asp | Gln | His | Cys | Ser | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | |
| Leu | Pro | Ile | Leu | Arg | Pro | Met | Val | Leu | Ser | Thr | Leu | Arg | Gln | Leu | Ser | |
| | | | 485 | | | | | | 490 | | | | | 495 | | |
| Thr | Ser | Thr | Ser | Ile | Leu | Thr | Asp | Pro | Ala | Gln | Leu | Pro | Glu | Gln | Ala | |
| | | | 500 | | | | | 505 | | | | | 510 | | | |
| Ser | Lys | Ala | Val | Thr | Arg | Ile | Gly | Lys | Arg | Leu | Gly | Glu | Ser | | | |
| | | 515 | | | | | 520 | | | | | 525 | | | | |

```
<210> 5927
<211> 1786
<212> DNA
<213> Homo sapiens
```

```
<400> 5927
ctccacactt tatttttgc tggctggattt gtcattttgc tgtcagaaca ggcctacaac
60
atacctcaga tgtttttcct ttaccttgct attctgagca aaagcatgac tccatcacct
120
gtctgggcac ataccgagtc tttgtctgga tgggtgtcagc acatcctgca cactcagcgg
180
caaccctgaa aataacatct accacctgcc aggcaattgg ctgactgctt ccgatgatctt
240
cagggggcatc gagggacaat gtatttagtc atgcacctct gtaagtgcag ggaaatgtac
300
tggggacacct ttcgattccc aaggaaataa aaggaaaatg acaaacacat agtcacgctg
360
tggatccctg tttattccca tctctgggca ggctgtaaa gagcatcgac ccaggtctca
420
```

accccactgc tggtaactga gccacagaaa ctgtaagcaa gtgacactca tccagggaga
 480
 actactcccc taaaccgggt cttagccagc aagagaggcc cacaggaagg tctctgataa
 540
 cctgaagttt tgaaaagctt agaactgtgt gatcaggcca tatgcccctc agttcctgaa
 600
 tgttcactac cctgtggtgt ccctttgcc tggagagac tccaaccaca cacatcagtt
 660
 aagctgccaa cactgttttc tccccattct gctctgcgaa caacgcacag tccagccagg
 720
 agctcaacag ggaggggtttt cttgttgtgt catggctgag atcaaagtca ttgtacacca
 780
 aggacatagt ggacagaagg gagccaacaa ctttatgcc aaatcccatt cccaagatga
 840
 ctatatatta tagtttatta tgaggtaact gcctccagac agataagccc ctgcatgatg
 900
 ctgaaagtca gagcctgggg gtgaatgcc ccttatcttt gtctcctca gctggctctgc
 960
 gtgtctctgc tcagaacgct gtgtagtagt gctccattgt gctgacaatg tcactctggg
 1020
 cctccaggag ctccagaact tgctgcagca cagcctcgct caggcccggg cggatgctca
 1080
 ggcgagcaca ggccaagatg tgcaggaagt gacagccctt ctccatgtga tttggtttct
 1140
 ggcagtcttg ctgaatgatc cgggtggatct ttctgtgcag gtctttgtct tctctgggta
 1200
 catagtatag gttatcaaaa ccatcatctt tctggaaaac aagtcctttt tcctgcagca
 1260
 gttgtatagc attcttaaat atactatgaa ttgccttgga agtgggtgtcc ttcttaaaat
 1320
 tcacttggtc ggagcaggca ctgtgaatca caggctgatt ggcaaggagc agcaaagact
 1380
 cgaccatttc cagctcctgc tggtaaaagc tctgcactct gttctccatg aggaattctt
 1440
 tggctttttc actcagcaaa ctctgtgagc tggggagggtc cagggcgctt ggattgctta
 1500
 gtgcctcttc tttctctagg gctgagctgt gaaaaggctg gtcataaact ttctgtaga
 1560
 tagtgggcag ctcaagcatc cttgcaattt gaatgttcca cactgggtcg tccactttat
 1620
 agtaagcggg ggcatgaatc tctcgctctt ctctgtatgt gcggatactg cctctgactc
 1680
 ggatcgtgtc cccgatctct atctttgttt tctgctcaat ggtctcttgt agcttcttaa
 1740
 gttgtgaggt taagctgagc tctcttgctg cacttgagc agccct
 1786

<210> 5928

<211> 202

<212> PRT

<213> Homo sapiens

<400> 5928

Met Leu Glu Leu Pro Thr Ile Tyr Arg Lys Val Tyr Asp Gln Pro Phe

| | | | |
|---|-----|-----|-----|
| 1 | 5 | 10 | 15 |
| His Ser Ser Ala Leu Glu Lys Glu Glu Ala Leu Ser Asn Pro Gly Ala | | | |
| 20 | 25 | 30 | |
| Leu Asp Leu Pro Ser Leu Thr Ser Leu Leu Ser Glu Lys Ala Lys Glu | | | |
| 35 | 40 | 45 | |
| Phe Leu Met Glu Asn Arg Val Gln Ser Phe Tyr Gln Gln Glu Leu Glu | | | |
| 50 | 55 | 60 | |
| Met Val Glu Ser Leu Leu Ser Leu Ala Asn Gln Pro Val Ile His Ser | | | |
| 65 | 70 | 75 | 80 |
| Ala Cys Ser Asp Gln Val Asn Phe Lys Lys Asp Thr Thr Ser Lys Ala | | | |
| 85 | 90 | 95 | |
| Ile His Ser Ile Phe Lys Asn Ala Ile Gln Leu Leu Gln Glu Lys Gly | | | |
| 100 | 105 | 110 | |
| Leu Val Phe Gln Lys Asp Asp Gly Phe Asp Asn Leu Tyr Tyr Val Thr | | | |
| 115 | 120 | 125 | |
| Arg Glu Asp Lys Asp Leu His Arg Lys Ile His Arg Ile Ile Gln Gln | | | |
| 130 | 135 | 140 | |
| Asp Cys Gln Lys Pro Asn His Met Glu Lys Gly Cys His Phe Leu His | | | |
| 145 | 150 | 155 | 160 |
| Ile Leu Ala Cys Ala Arg Leu Ser Ile Arg Pro Gly Leu Ser Glu Ala | | | |
| 165 | 170 | 175 | |
| Val Leu Gln Gln Val Leu Glu Leu Leu Glu Asp Gln Ser Asp Ile Val | | | |
| 180 | 185 | 190 | |
| Ser Thr Met Glu His Tyr Tyr Thr Ala Phe | | | |
| 195 | 200 | | |

<210> 5929

<211> 606

<212> DNA

<213> Homo sapiens

<400> 5929

```

nngcgcgccg ccgcgtcccc agacaaaggc ttggccggcg gccccggccc gctgcgccct
60
cgctccccgc ctccccagct cttctccgct cctccccccc gcgcttggtc cggcgcgctc
120
cggccggccg caaagtttcc cgggcggcag cggcggctgc gcctcgcttc agcgatggcc
180
gcggagctga gcatggggcc agagctgccc accagcccgc tggccatgga gtatgtcaac
240
gacttcgacc tgctcaagtt cgacgtgaag aaggagccac tggggcgcgc ggagcgtccg
300
ggcaggccct gcacacgcct gcagccagcc ggctcgggtg cctccacacc gctcagcact
360
ccgtgtagct ccgtgccctc gtcgcccagc ttcagcccga ccgaacagaa gacacacctc
420
gaggatctgt actggatggc gagcaactac cagcagatga accccgaggc gctcaacctg
480
acgcccaggg acgcggtgga agcgtctatc ggctcgcacc cagtgccaca gccgctgcaa
540
agcttcgaca gctttcgcgg cgctcaccac caccaccatc accaccaccc tcaccgcgac
600
cacgcg
606

```

<210> 5930
 <211> 144
 <212> PRT
 <213> Homo sapiens

<400> 5930
 Met Ala Ala Glu Leu Ser Met Gly Pro Glu Leu Pro Thr Ser Pro Leu
 1 5 10 15
 Ala Met Glu Tyr Val Asn Asp Phe Asp Leu Leu Lys Phe Asp Val Lys
 20 25 30
 Lys Glu Pro Leu Gly Arg Ala Glu Arg Pro Gly Arg Pro Cys Thr Arg
 35 40 45
 Leu Gln Pro Ala Gly Ser Val Ser Ser Thr Pro Leu Ser Thr Pro Cys
 50 55 60
 Ser Ser Val Pro Ser Ser Pro Ser Phe Ser Pro Thr Glu Gln Lys Thr
 65 70 75 80
 His Leu Glu Asp Leu Tyr Trp Met Ala Ser Asn Tyr Gln Gln Met Asn
 85 90 95
 Pro Glu Ala Leu Asn Leu Thr Pro Glu Asp Ala Val Glu Ala Leu Ile
 100 105 110
 Gly Ser His Pro Val Pro Gln Pro Leu Gln Ser Phe Asp Ser Phe Arg
 115 120 125
 Gly Ala His His His His His His His His Pro His Pro His His Ala
 130 135 140

<210> 5931
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 5931
 nggagatggc ggagtcgctt gaggtctccg cgccgctccc tgtacaaact ggtgggctcg
 60
 ccgccttgga aagaggcttt ccggcagaga tgccctggaga gaatgagaaa cagccgggac
 120
 aggtctctaa acaggtaccg ccaggctgga agcagtgggc cagggaattc tcagaacagc
 180
 tttctagttc aagaggatgat ggaagaagag tggaatgctt tgcagtcagt ggagaattgt
 240
 ccagaagact tggctcagct ggaggagctg atagacatgg ctgtgctgga ggaaattcaa
 300
 caggagctga tcaaccaagg tacaacctga gaatcacaag cgggtgtggtg gtgtgtcagt
 360
 gtggcctgtc catcccatct cattcttctg agttgacaga gcagaagctt cgtgcctgtt
 420
 tagagggtag tataaatgag cacagtgcac attgtcccca cacacccct tcacgcgt
 478

<210> 5932
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 5932

Xaa Arg Trp Arg Ser Arg Leu Arg Ser Pro Arg Arg Ser Leu Tyr Lys
 1 5 10 15
 Leu Val Gly Ser Pro Pro Trp Lys Glu Ala Phe Arg Gln Arg Cys Leu
 20 25 30
 Glu Arg Met Arg Asn Ser Arg Asp Arg Leu Leu Asn Arg Tyr Arg Gln
 35 40 45
 Ala Gly Ser Ser Gly Pro Gly Asn Ser Gln Asn Ser Phe Leu Val Gln
 50 55 60
 Glu Val Met Glu Glu Glu Trp Asn Ala Leu Gln Ser Val Glu Asn Cys
 65 70 75 80
 Pro Glu Asp Leu Ala Gln Leu Glu Glu Leu Ile Asp Met Ala Val Leu
 85 90 95
 Glu Glu Ile Gln Gln Glu Leu Ile Asn Gln Gly Thr Thr
 100 105

<210> 5933

<211> 1953

<212> DNA

<213> Homo sapiens

<400> 5933

atggagatcc gagagaaggg ctccgagttc ctgaaggagg agctgcacag agcgcagaag
 60
 gagctgaagc taaaggacga ggaatgtgag cggctgtcca aggtgcggga gcagctagaa
 120
 caggagctgg aagagctgac ggccagcctg tttgaggaag ctcaacaagat ggttcgagaa
 180
 gccaacatga agcaggcggc atcagaaaag cagctgaagg aggtcgggg caagatcgac
 240
 atgtgcagg cagaggtgac agccttgaag acactggtca tcacgtccac accagcctct
 300
 cccaaccgag agcttcaccc ccagctgctg agccccacca aggcggggcc ccgaaagggc
 360
 cactctcgcc acaagagcac cagcagcacc ctctgccccg ccgtgtgtcc cgctgcggga
 420
 cacaccctca cccagacag agagggcaag gaggtggaca caatcctgtt tgcagagttc
 480
 caggcctgga gggaaatccc caccctggac aagacctgcc ccttcctgga aagggtgtac
 540
 cgagaggacg tgggcccctg cctggacttc acaatgcagg agctctcggt gctggtacgg
 600
 gccgccgtgg aggacaacac gctcaccatt gagccggtgg cttcgcagac gctgccaca
 660
 gtgaagggtg cagaggttga ctgtagcagc accaacacat gtgccctgag cgggctgacc
 720
 cgcacctgcc gccaccgaat ccggctcggg gactccaaaa gccattacta catctcgcca
 780
 tcttcccggg ccaggatcac cgcagtgtgc aacttcttca cctacatccg ctacatccag
 840
 caaggcctgg tgcggcagga cgcagagccc atgttctggg agatcatgag gttgcggaag
 900
 gagatgtcac tggccaagct cggcttcttc cccagaggagg cttagggcgc ggcccaggcc
 960

tgaaggggag ctctgagaca gagcaaacac ccaccccaga acaagccgac acacagggag
 1020
 acgggggcct ggagccagcc ctgagccaga ggcagaatgg atggacagac aggccatgga
 1080
 ggcagcactg agccagcacc acacgtccat cctgggacag acgggcctgg acttcacggc
 1140
 aagaccccc tctcttcccc actgggttct gccaccacca ggaggatttc aagaaagcac
 1200
 caaagaccag ggagctcgga tccatactcg gggggcctca gcccttggga ggggacacct
 1260
 gaggcagcca gcgccccctc ccagtcctcc agaactgcct gcaggtgcct tgttgctggc
 1320
 ttgtcttcag aaagggactg ttctgggtgg ctggatctcc agggtaacct ccaccccagc
 1380
 tgccaagccc tgggccagca gcacccccct gtggccatcc tgtgccttgt tcccgggtggc
 1440
 ctccctattg gactactagg aggggctggc agggcctcca tagcacagaa ttgccccaaa
 1500
 gccttggtta gatgagtcaa gacccctccc ccgttctctc ccttcttttc ccccttctc
 1560
 cctccccctt cataaaggcc tcccttgta ccttccctcc caccctgtct cagccctgtg
 1620
 ctctggagg cctgtctccc aaaaccgctg gaaggactgg ggcactttct gccacagtag
 1680
 aacacagaca gggcttcaga tcacccacgc ctgttttcag ctgtgggtgg ccatgcagac
 1740
 acgcgccctg gcatgtgggg cctgggtggg caggcaggac ctgggccctc ccacccatca
 1800
 gagccactc aggaccagcg ttcggagctc ccacctggac gcatccctca ccacgtccgg
 1860
 atttcttct ttggatggaa tgtaacgcga tctctattta ataaaggcag gctttgttgg
 1920
 tacaggcaaa aaaaaaaaaa aaaaaaaaaa aaa
 1953

<210> 5934

<211> 314

<212> PRT

<213> Homo sapiens

<400> 5934

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Ile | Arg | Glu | Lys | Gly | Ser | Glu | Phe | Leu | Lys | Glu | Glu | Leu | His |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Arg | Ala | Gln | Lys | Glu | Leu | Lys | Leu | Lys | Asp | Glu | Glu | Cys | Glu | Arg | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Lys | Val | Arg | Glu | Gln | Leu | Glu | Gln | Glu | Leu | Glu | Glu | Leu | Thr | Ala |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Leu | Phe | Glu | Glu | Ala | His | Lys | Met | Val | Arg | Glu | Ala | Asn | Met | Lys |
| | | 50 | | | | 55 | | | | 60 | | | | | |
| Gln | Ala | Ala | Ser | Glu | Lys | Gln | Leu | Lys | Glu | Ala | Arg | Gly | Lys | Ile | Asp |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Met | Leu | Gln | Ala | Glu | Val | Thr | Ala | Leu | Lys | Thr | Leu | Val | Ile | Thr | Ser |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Thr | Pro | Ala | Ser | Pro | Asn | Arg | Glu | Leu | His | Pro | Gln | Leu | Leu | Ser | Pro |

[illegible]

<210> 5935

<211> 2727

<212> DNA

<213> Homo sapiens

<400> 5935

nngtcgcctc cgcttgatcc ccggcctgtc ggccgacccc acctcgccaa ccgaggcgga
 60

ccgcggagtg tgcgaacgac cccaccgctg cttttctctc cccagatca cgcaccccag
120

ctccggaata tggggaactg cctcaaatcc cccacctcgg atgacatctc cctgcttcac
180

gagtctcagt ccgaccgggc tagctttggc gaggggacgg agccggatca ggagccgccg
240

ccgccatata aggaacaagt tccagttcca gtctaccacc caaacacctag ccagactcgg
300

ctagcaactc agctgactga agaggaacaa attaggatag ctcaaagaat aggtcttata
360

caacatctgc ctaaaggagt ttatgaccct ggaagagatg gatcagaaaa aaagatccgg
420

gagtgtgtga tctgtatgat ggactttgtt tatggggacc caattcgatt tctgccgtgc
480

atgcacatct atcacctgga ctgtatagat gactgggtga tgagatcctt cacgtgcccc
540

tcttgcattgg agccagttga tgcagcactg ctttcatcct atgagactaa ttgagccagg
600

gtctcttatac tgacttcaag tgaaccacca ttttggtggt tttgatcttt tgtcactgag
660
cccaaagagc cagggattag gaattaagat cgtgcacaaa agtttcctta aaattcctgg
720
atggctgcag atgttggggg aaaaagtacg tgatatttta gaaacttagt gggaaaagta
780
ggatgggtatt tttatgtaaa gccttgaccc aatgtttaaa aatataattg tatttagatc
840
ttgttattgc tccagtacat aggaattgtg taaagtgtta acagcagctg tatttgttta
900
aattgtgtgt attgaagatt aggaaaaaga tagtagttat ttttcctaaa tgaaataact
960
ttcttctctt ccccttcccc acccgaattc ttttctgaag ttgctggcat ttgggtcaag
1020
gttttattaa aagctacatt ttataacact ggcacacaca aaaaagtagt ttttaagcttg
1080
tttgcacagt tctttttttc cattggaaat ggaattcatt gccttaggtc tttttaaata
1140
gtgtattatt atcgttgggg ctggctctat gcttgaaaac cagtttattt ataacctgtt
1200
ataagtgcta tattctgttt gcagttagga aatgcagaat tcaaagtgat ctcttagctt
1260
gtaagcaaac tgagatgcac tatccctttt ctataaaaaa taagttaatg tgtcaagaaa
1320
ccaactctat taaggtgggg tttaatatta ccttttcta tgtgttttat ctaattattt
1380
tggttggttaa tatggtgata atggaaagtc aagttaaatt tttaatatta agaattctga
1440
tttattgaga ttgaattatg ccaccacgtt tatgtaaaaa tgaaggtggc accgtggtga
1500
gacctaatga gaaatagtta ctcagttgta aaaattttga tttattctct ttcttctgac
1560
ctccttgctt cttgtcttga accatagcaa aaggatactg catctctcat tactgtagtg
1620
ctgaggttat tgaagttata caaaacacat ctcagttctt gtttcttgga aaggatatcta
1680
ttacatcctg ctagctgact gacaaaacta agcagggaga ataaagataa ttgtatttta
1740
tgttttgcac acaaacgcag aatttgtata accatatgac ttcatagttg tgatctcaaa
1800
aaagaaggaa tttctccttt gtttcttgca gttaatgtaa gaatacttta aatctctaag
1860
cttctgaagt gttagaggta gagatggctt agtaaagatg tagtagtaat gttttatcca
1920
tttagcatgt gtttattttt tcatatgtac tcaaagggtga cttattgggt cacctcagtg
1980
atattacagc taaaaaaatc attcattagc aaaaggaaaa gtggtctcaa cctaacatca
2040
gaagtgtttc ttattattat tttatattga gttgaatatt gaactctaac agttttctac
2100
atacaaaaaca cagtgtcatg aagggttattc ataattgcat tatagaggaa tgtagtatgt
2160
cataagtact ttgtaaagat ttgacattca actgtagtat ccatatgttg cttaaatttc
2220

cttatgagcc ccatgatgga aagacttaaa gatgaatttg agaaaaattg aaagaaatta
 2280
 gattatcagg ttctgttaaa ttgttacatg tatcttgctt aaatttctgt ttattaattt
 2340
 atatccaccc aagtacataa agcaaatttg gaggaacaaa ctgaagttgt gcaatatttt
 2400
 ctgataattg ctttttttat tcttgtgttt tctacttaaa cataatgtct gtgtcatcaa
 2460
 gtattatagt cagacttttc tttttttcta gattgttaaa attggcaaatt gaactttttt
 2520
 aaaaatcatc ttccatgttg cagttagtct ttcttttcat tacaagtctt tcacagaagt
 2580
 ttggtggtta tattgaaaga actagcattg ggcagaatgt gtctttttta ggcactttat
 2640
 attctcaaca tacaatgtta agaaccatca attttgactt ttactaagtt gttaaataaa
 2700
 gttataatac agctgtgaaa aaaaaaa
 2727

<210> 5936

<211> 154

<212> PRT

<213> Homo sapiens

<400> 5936

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Asn | Cys | Leu | Lys | Ser | Pro | Thr | Ser | Asp | Asp | Ile | Ser | Leu | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| His | Glu | Ser | Gln | Ser | Asp | Arg | Ala | Ser | Phe | Gly | Glu | Gly | Thr | Glu | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asp | Gln | Glu | Pro | Pro | Pro | Pro | Tyr | Gln | Glu | Gln | Val | Pro | Val | Pro | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Tyr | His | Pro | Thr | Pro | Ser | Gln | Thr | Arg | Leu | Ala | Thr | Gln | Leu | Thr | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Glu | Gln | Ile | Arg | Ile | Ala | Gln | Arg | Ile | Gly | Leu | Ile | Gln | His | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Pro | Lys | Gly | Val | Tyr | Asp | Pro | Gly | Arg | Asp | Gly | Ser | Glu | Lys | Lys | Ile |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Arg | Glu | Cys | Val | Ile | Cys | Met | Met | Asp | Phe | Val | Tyr | Gly | Asp | Pro | Ile |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Phe | Leu | Pro | Cys | Met | His | Ile | Tyr | His | Leu | Asp | Cys | Ile | Asp | Asp |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Trp | Leu | Met | Arg | Ser | Phe | Thr | Cys | Pro | Ser | Cys | Met | Glu | Pro | Val | Asp |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ala | Ala | Leu | Leu | Ser | Ser | Tyr | Glu | Thr | Asn | | | | | | |
| 145 | | | | | | 150 | | | | | | | | | |

<210> 5937

<211> 1536

<212> DNA

<213> Homo sapiens

<400> 5937

naagcttttag tgattgtggc ttattcacag ctattctttg ctgcaacctg attgaaaatg
 60

```

ttcagagatt aggcttgaca cccaccactg tcattagatt aaataaacat cttttgagtc
120
tttgcacag ttatctcaag gtctgagacc tgtggttgtc gaaccccagt ggactttagt
180
agtactcaga tcctcctttg tttggtgcgt agtatattaa caagtaaacc tgccctgatg
240
ctcaccagaa aggaaacaga gcatgtcagt gctttgattc ttagagcctt tttgcttaca
300
attccagaaa atgctgaagg ccacatcatt ttaggaaaga gtttaattgt accttttaaa
360
gggtcaagag ttatagattc cactgtatta cctgggatac tcattgaaat gtcagaagtt
420
caattaatga ggctattacc tatcaaaaaa tcaactgccc tcaagggtggc actcttttgt
480
acaactttat ccggagacac ttctgacact ggagaaggaa ctgtggtggt cagttatggg
540
gtttctcttg aaaatgcagt cttggaccag ctgcttaacc taggaaggca gctaactcagt
600
gaccacgtag atcttgtcct gtgccaaaaa gttatacatc catctttgaa gcagtttctc
660
aatatgcac gtattattgc catagacaga attggagtga ctctgatgga acccctgact
720
aaaatgacag gaacacagcc tattggatcc ctaggctcaa tatgtcctaa tagttatgga
780
agtgtgaaag atgtgtgcac tgcaaaattt ggctccaaac atttttttca tcttattcct
840
aatgaagcaa caatctgcag cttgcttctc tgcaacagaa atgacactgc ctgggatgag
900
ctgaagctca cgtgtcagac ggcactgcat gtcctgcagt taacactcaa ggaaccatgg
960
gctttgttgg gaggtggctg tactgaaact catttggctg catatatcag acacaagact
1020
cacaacgacc cagaaagcat tctcaaagat gatgaatgta ctcaaacaga acttcaatta
1080
attgctgaag ctttttgcag tgccctagaa tctgttggtg gctctttaga acatgatgga
1140
ggtgaaattc tactgacat gaagtatgga cacctttggt cagttcaggc agattctccc
1200
tgtgttgcta actggccaga tttgctttca cagtgtggct gtggattata caatagccag
1260
gaagaactca actggtcttt cttaagaagc acacgtcgtc ctttgtgcc acaaagctgc
1320
cttcacatg aagctgtggg ctgagccagc aacctgacct tggactgttt gactgcaaag
1380
cttagtgcc tacaggtggc tgtagagaca gccaatgtga ttttgatct tcatatgtt
1440
attgaagata aaaactaaga gaatagcatg ttcgtattac aagagaaaca aataaactag
1500
tctgttgga attgaaaaaa aaaaaaaaaa aaaaaa
1536

```

<210> 5938

<211> 406

<212> PRT

<213> Homo sapiens

<400> 5938

```

Met Leu Thr Arg Lys Glu Thr Glu His Val Ser Ala Leu Ile Leu Arg
 1      5      10      15
Ala Phe Leu Leu Thr Ile Pro Glu Asn Ala Glu Gly His Ile Ile Leu
      20      25      30
Gly Lys Ser Leu Ile Val Pro Phe Lys Gly Ser Arg Val Ile Asp Ser
      35      40      45
Thr Val Leu Pro Gly Ile Leu Ile Glu Met Ser Glu Val Gln Leu Met
      50      55      60
Arg Leu Leu Pro Ile Lys Lys Ser Thr Ala Leu Lys Val Ala Leu Phe
65      70      75      80
Cys Thr Thr Leu Ser Gly Asp Thr Ser Asp Thr Gly Glu Gly Thr Val
      85      90      95
Val Val Ser Tyr Gly Val Ser Leu Glu Asn Ala Val Leu Asp Gln Leu
      100     105     110
Leu Asn Leu Gly Arg Gln Leu Ile Ser Asp His Val Asp Leu Val Leu
      115     120     125
Cys Gln Lys Val Ile His Pro Ser Leu Lys Gln Phe Leu Asn Met His
      130     135     140
Arg Ile Ile Ala Ile Asp Arg Ile Gly Val Thr Leu Met Glu Pro Leu
145     150     155     160
Thr Lys Met Thr Gly Thr Gln Pro Ile Gly Ser Leu Gly Ser Ile Cys
      165     170     175
Pro Asn Ser Tyr Gly Ser Val Lys Asp Val Cys Thr Ala Lys Phe Gly
      180     185     190
Ser Lys His Phe Phe His Leu Ile Pro Asn Glu Ala Thr Ile Cys Ser
      195     200     205
Leu Leu Leu Cys Asn Arg Asn Asp Thr Ala Trp Asp Glu Leu Lys Leu
      210     215     220
Thr Cys Gln Thr Ala Leu His Val Leu Gln Leu Thr Leu Lys Glu Pro
225     230     235     240
Trp Ala Leu Leu Gly Gly Gly Cys Thr Glu Thr His Leu Ala Ala Tyr
      245     250     255
Ile Arg His Lys Thr His Asn Asp Pro Glu Ser Ile Leu Lys Asp Asp
      260     265     270
Glu Cys Thr Gln Thr Glu Leu Gln Leu Ile Ala Glu Ala Phe Cys Ser
      275     280     285
Ala Leu Glu Ser Val Val Gly Ser Leu Glu His Asp Gly Gly Glu Ile
      290     295     300
Leu Thr Asp Met Lys Tyr Gly His Leu Trp Ser Val Gln Ala Asp Ser
305     310     315     320
Pro Cys Val Ala Asn Trp Pro Asp Leu Leu Ser Gln Cys Gly Cys Gly
      325     330     335
Leu Tyr Asn Ser Gln Glu Glu Leu Asn Trp Ser Phe Leu Arg Ser Thr
      340     345     350
Arg Arg Pro Phe Val Pro Gln Ser Cys Leu Pro His Glu Ala Val Gly
      355     360     365
Ser Ala Ser Asn Leu Thr Leu Asp Cys Leu Thr Ala Lys Leu Ser Gly
      370     375     380
Leu Gln Val Ala Val Glu Thr Ala Asn Leu Ile Leu Asp Leu Ser Tyr
385     390     395     400
Val Ile Glu Asp Lys Asn

```

405

<210> 5939

<211> 795

<212> DNA

<213> Homo sapiens

<400> 5939

```

nnctgtctcc cctccgcct ctccctgcat tcttggtgct tctgggctct cctggggacc
60
ttatgtgcat tcgcctttcc ccaacgtgtc ccttctcccc tctctctcat cctccgggcg
120
gcgtgcgcct cctgcctctc cccggccggc cacacggtgg cgctgtgtcc cgctcgcccc
180
cccgcccgcg gctcgccccg agcctgcaag cgcaaggaac aggagcagca gaaggagcgc
240
gccctgcagc ccaagaagca gcgcctggtg ttcaccgacc tgcagcgacg cacgctgac
300
gccatcttca aggagaacaa gcggccgtcc aaggagatgc aggtcaccat ctgcgagcag
360
ctcggcttgg agctcaacac cgtcagcaac ttcttcatga acgcgcggcg ccgctgcatg
420
aaccgctggg ctgaggagcc cagcacggcc cccggggggc ccgccggcg caccggccact
480
ttctccaagg cctgaggcgc cccggccccc cgccctccct gctccacgg cctgggcgct
540
gtgccccac gtcacctccc cacatcctgc cggcccggag acccgcccc agggggcacc
600
tggagggggg gctatccggg cccccacac ccggggaggg ggaagcagca cccccccag
660
cccaagtgca caaaaagggc ccccttccct cctccatgc cactccctc caggccaaag
720
gaagccctcc accccccccc ggaggggagg gaggacaga aagggtttc ccagcccct
780
ctccattcag gacgc
795

```

<210> 5940

<211> 96

<212> PRT

<213> Homo sapiens

<400> 5940

```

Cys Lys Arg Lys Glu Gln Gln Lys Glu Arg Ala Leu Gln Pro
1           5           10           15
Lys Lys Gln Arg Leu Val Phe Thr Asp Leu Gln Arg Arg Thr Leu Ile
20           25           30
Ala Ile Phe Lys Glu Asn Lys Arg Pro Ser Lys Glu Met Gln Val Thr
35           40           45
Ile Ser Gln Gln Leu Gly Leu Glu Leu Asn Thr Val Ser Asn Phe Phe
50           55           60
Met Asn Ala Arg Arg Arg Cys Met Asn Arg Trp Ala Glu Glu Pro Ser
65           70           75           80
Thr Ala Pro Gly Gly Pro Ala Gly Ala Thr Ala Thr Phe Ser Lys Ala

```

85

90

95

<210> 5941

<211> 2590

<212> DNA

<213> Homo sapiens

<400> 5941

```

tttttttttt tttttttttt ttaatcttct aagtcctttt aattgttctt ataaactagc
60
ataagatata aacttaagta gtacacatga gttttataat ttactaatct ctgacagata
120
gctaagcata gcacatcaga gcataacaca gtgtgagggg aataaagtgt acaatgacat
180
cttctattct ggacctaata attcaataga gaaagaacta cttgtagtca ctgtggttac
240
agaaggtttc atggacagcg aacataaagc tctactagct aacaaatagg tcttaatgat
300
aaaaacgtgg gccttcagag aactaaaggt accaatgtgt ggcagtcctaa aattacgagg
360
aaaatgagtt cccttcagtg gtcacatcag caattttttt ttcccccttt gagacagagt
420
cttgctctgc tgncccaggt tggagtgcag tggcatgatc caggctcact gcaacctccg
480
cctcccgggt tcaagcaatt ctcatgcctc agcctcccgga gtagctggga ttacaggtgc
540
ctgtcatcac ggctggctac tttttgtatt tttagtagag acagggtttc accatgttgg
600
ccaggctggg ctcaaactcc tgacctcaag tgatctgctt gcttcagcct cccaaagtgc
660
tagggttaca gacatgagcc actgtgcccc gctacctcat caattcttaa tctataaacc
720
atggataggg ttcgggagaa cccaagaacc aatgaaatct gttggtaagt tttatgtgtg
780
cggttttcta cagagagggg caacagcatg tatattttca aagaagtctg tggtgcaaaa
840
gagagtttat tgttagaagt ccttgggcaa tcaacttggg aaagggtgga ttgagaatgg
900
gggctgtcta gatcaggata atgttgaatt tgaccctcac ttgaggcttt tgtacagagg
960
atgagaagac ggtaaattca agggttaatc agaaattaac accaakatga cttggtgatg
1020
agtgagatgt gaaacgtgag aaaaacatca atgatgaaat caagcttctg acttgcaaca
1080
gtgagtatac caagagctac aggcttggaa gatgaataaa gttgggagca ttctgttttt
1140
tcatgagtgc ccatgggaca gacagggaga aatggacagt tgaaagtaca agtctagaca
1200
ggcacagtgg ctcagtctct taaccctagc actttgggag gctgagatag gagaattact
1260
agggttcagg agtttgagac gaacctgggt gacatagtga gagctcatct ctacaaaaaa
1320
taaaattagc tcggcatggg gctgcaagat tatagtcctc cagcctctga gtagctggga
1380

```

ttacagatgc tcaccaccat gcctaggttaa tttttgtatt tttagtagag atgggggtttc
 1440
 accatattgg ccaggcaggt cttgaactcc tgacctccag agatctgccc acttcagcct
 1500
 cccaaagtgc tgggattaca ggcgtattcc actgtgcccga gcctgagttt ctgttttagaa
 1560
 acaacagtct atgatagtat aatcctctct tttttgtaca cagagtaaag aggacaaaata
 1620
 ggtgaaagaa taaatgaaag gctggaatcc cacttcccc gctgtcccag ggcattggat
 1680
 attgacggat aggaggcagc aaaccactca cagagccagg aagaaatgaa tgcgttggta
 1740
 ttgcccaggag ggggaagccgg cccggctgaa atatgctatg accatagcca ggagatactg
 1800
 atggagagaa aggaacacag agagggagag gtcacatctt ggaagaggaa gattgtggag
 1860
 aggggggaatg aggggtctggg gaggggctgc ccatcagaga agggacctca gtgttgggg
 1920
 gactactcat ttggaaattg cgggatggag gggatattga aggtcggatg caaatccgag
 1980
 aagccagagg aagggttttg ggtgatgctc ccaggatggt gggctctgat gggatctttg
 2040
 gaggggggtgt gtctaggtcg gctggtgtca ggagggtctt ttgtgtgcca ggcagagaac
 2100
 tgtcccgaag agctgagagt agaggggcca ggagcttcag ggctgcggcc agactgtggc
 2160
 ccagagctca gatcccaaag gacccatagg agaggcaggg gccactcatt cactctgcaa
 2220
 gagaccagca gaatcctgag ggagatgctg acaaatcata aaaagaccaa gaatagccgg
 2280
 gagtggcggc tcaagcctgt gatcccagta ctttttgaga ggtggagaca ggaggatcat
 2340
 gtgagcccag cggttcgaga acaacctggg caacatgggtg agaccctgtt tctacaaaca
 2400
 tttcaaaaat tagttgggca tgggtggcatg tgcctagtcc cagctcctca ggaggctgag
 2460
 gaaagaagat tgcttgagcc caggaattag aggctgcaat gagctatgat catgccactg
 2520
 cactccatcc tgggtggctt gagaccctgt tggttagattc tagtcttgtc cattgttttt
 2580
 gagcttttta
 2590

<210> 5942

<211> 89

<212> PRT

<213> Homo sapiens

<400> 5942

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Ser | Leu | His | Gly | Ser | His | Gln | Gln | Phe | Phe | Phe | Pro | Leu | Leu |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Arg | Gln | Ser | Leu | Ala | Leu | Leu | Xaa | Gln | Val | Gly | Val | Gln | Trp | His | Asp |
| | | | 20 | | | | | 25 | | | | 30 | | | |
| Pro | Gly | Ser | Leu | Gln | Pro | Pro | Pro | Pro | Gly | Phe | Lys | Gln | Phe | Ser | Cys |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Leu | Ser | Leu | Pro | Ser | Ser | Trp | Asp | Tyr | Arg | Cys | Leu | Ser | Ser | Arg | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ala | Thr | Phe | Cys | Ile | Phe | Ser | Arg | Asp | Arg | Val | Ser | Pro | Cys | Trp | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Gly | Trp | Ser | Gln | Thr | Pro | Asp | Leu | Lys | | | | | | | |
| | | | | 85 | | | | | | | | | | | |

<210> 5943

<211> 781

<212> DNA

<213> Homo sapiens

<400> 5943

nacgcgttg cagcggcagg agtaaccaga gggagcatat acgccagttg gggttaaagac
 60
 tgcttggtt gaattgttg aaatgatctc gactcggcgc aaactaaacc aactctggat
 120
 ggacaacttg ttgtaattgg taaggatgaa tcttatagca agacttcttg gggttccagc
 180
 atcaccaagc ttcaaagaca accatttggg gttgagacca agcctggaat cctttgctgt
 240
 tttcaaaacg agtttgagaa cccttgcttt ccaaagtctc atttttctgt cacccaagct
 300
 ggagagcaat ggcgcgatct cagctcacca caacctccgc ctcccagggt caagcaattc
 360
 tcctgtctca gcctcccag tagctgggac cacaggcacc cgccaccacg cccggctaac
 420
 ttttgatatt ttagtagaga cgaggtttca ccgcgggtct gatctcctga cctcatgnna
 480
 tccgcccacc tcggcctccc aaagtgtctg gattacaggc gtgagccact gcgcccagcc
 540
 cagatcagcc ttttatattag caagtcacca tcacaagaca tacaggctaa ggcttaaaag
 600
 aagcccttgg gtttaaaaca aatgtttagg aggagatgag aagtttctca tctttgatgg
 660
 ctacaaaaat catcaaaaca aattcagggt cagagtctag aaaagatggt actatttgca
 720
 gcatgggtct gatacagcag ttcttaacgg gtaaactgct ttgttttaat ttatattaca
 780
 g
 781

<210> 5944

<211> 174

<212> PRT

<213> Homo sapiens

<400> 5944

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Val | Gly | Asn | Asp | Leu | Asp | Ser | Ala | Gln | Thr | Lys | Pro | Thr | Leu | Asp |
| 1 | | | | | 5 | | | | 10 | | | | | 15 | |
| Gly | Gln | Leu | Val | Val | Ile | Gly | Lys | Asp | Glu | Ser | Tyr | Ser | Lys | Thr | Ser |
| | | | 20 | | | | 25 | | | | | 30 | | | |
| Gly | Val | Ser | Ser | Ile | Thr | Lys | Leu | Gln | Arg | Gln | Pro | Phe | Gly | Val | Glu |

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
| | | 35 | | | | | 40 | | | | | 45 | | | | | | |
| Thr | Lys | Pro | Gly | Ile | Leu | Cys | Cys | Phe | Gln | Asn | Glu | Phe | Glu | Asn | Pro | | | |
| | 50 | | | | | 55 | | | | | 60 | | | | | | | |
| Cys | Phe | Pro | Lys | Ser | His | Phe | Ser | Val | Thr | Gln | Ala | Gly | Glu | Gln | Trp | | | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | | | |
| Arg | Asp | Leu | Ser | Ser | Pro | Gln | Pro | Pro | Pro | Pro | Arg | Phe | Lys | Gln | Phe | | | |
| | | | | 85 | | | | | 90 | | | | | 95 | | | | |
| Ser | Cys | Leu | Ser | Leu | Pro | Ser | Ser | Trp | Asp | His | Arg | His | Pro | Pro | Pro | | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | | |
| Arg | Pro | Ala | Asn | Phe | Cys | Ile | Phe | Ser | Arg | Asp | Glu | Val | Ser | Pro | Arg | | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | | |
| Ser | Arg | Ser | Pro | Asp | Leu | Met | Xaa | Ser | Ala | His | Leu | Gly | Leu | Pro | Lys | | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | | |
| Cys | Trp | Asp | Tyr | Arg | Arg | Glu | Pro | Leu | Arg | Pro | Ala | Gln | Ile | Ser | Leu | | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | | |
| Leu | Phe | Ser | Lys | Ser | Pro | Ser | Gln | Asp | Ile | Gln | Ala | Lys | Ala | | | | | |
| | | | | 165 | | | | | 170 | | | | | | | | | |

<210> 5945

<211> 869

<212> DNA

<213> Homo sapiens

<400> 5945

| | | | | | |
|-------------|-------------|------------|------------|------------|------------|
| nnttcggcct | gagagcgggc | cgaggagatt | ggcgacggtg | tccggtgttt | tcgttggcgg |
| 60 | | | | | |
| gtgcctgggc | tgggtgggaac | accgcccga | gaagcaccat | gatttcggcc | gcgcagttgt |
| 120 | | | | | |
| tgcatgagtt | aatggggccg | gaccgaaacc | tagccccgga | cgagaagcgc | agcaacgtgc |
| 180 | | | | | |
| ggtggggacca | cgagagcggt | tgtaaatatt | atctctgtgg | tttttgtcct | gcggaattgt |
| 240 | | | | | |
| tcacaaatac | acgttctgat | cttgatgtat | ttggaagagg | agataacatt | agagatgtca |
| 300 | | | | | |
| gcaaattttt | ggaagatgac | aagtggatgg | aggagtagca | gcaaacgcaa | cagagcagag |
| 360 | | | | | |
| caacctgtac | cctaaaagcc | tgcagaaggg | gatactaaac | agaagcgagt | gtttgatcag |
| 420 | | | | | |
| cagaaccttg | gacaggctca | ggatttggag | gcaccaggca | gaagaaaaga | ggattcttct |
| 480 | | | | | |
| ctagagaaaag | tgaacagttc | ctgagaagtg | atctctgcag | gtccgtgtga | aaaaattcat |
| 540 | | | | | |
| gatgaaaatc | tacgaaaaca | gtatgagaag | agctctcggt | tcatgaaagt | tggctatgag |
| 600 | | | | | |
| agagattttt | tgcgatactt | acagagctta | cttgcagaag | tagaacgtag | gatcagacga |
| 660 | | | | | |
| ggccatgctc | gtttggcatt | atctcaaaac | cagcagtcct | ctggggccgc | tggcccaaca |
| 720 | | | | | |
| ggcaaaaatg | gagaaaaaat | tcaggttcta | acagacaaaa | ttgatgtact | tctgcaacag |
| 780 | | | | | |
| attgaagaat | tagggtctga | aggaaaagta | gaagaagccc | aggggatgat | gaaattagtt |
| 840 | | | | | |
| gagcaattaa | aagaagagag | agaactgct | | | |
| 869 | | | | | |

<210> 5946
 <211> 121
 <212> PRT
 <213> Homo sapiens

<400> 5946
 Glu Val Ile Ser Ala Gly Pro Cys Glu Lys Ile His Asp Glu Asn Leu
 1 5 10 15
 Arg Lys Gln Tyr Glu Lys Ser Ser Arg Phe Met Lys Val Gly Tyr Glu
 20 25 30
 Arg Asp Phe Leu Arg Tyr Leu Gln Ser Leu Leu Ala Glu Val Glu Arg
 35 40 45
 Arg Ile Arg Arg Gly His Ala Arg Leu Ala Leu Ser Gln Asn Gln Gln
 50 55 60
 Ser Ser Gly Ala Ala Gly Pro Thr Gly Lys Asn Gly Glu Lys Ile Gln
 65 70 75 80
 Val Leu Thr Asp Lys Ile Asp Val Leu Leu Gln Gln Ile Glu Glu Leu
 85 90 95
 Gly Ser Glu Gly Lys Val Glu Glu Ala Gln Gly Met Met Lys Leu Val
 100 105 110
 Glu Gln Leu Lys Glu Glu Arg Glu Leu
 115 120

<210> 5947
 <211> 2283
 <212> DNA
 <213> Homo sapiens

<400> 5947
 gacaagtgga ggcgccgctc tagcgcggga ctctgaacta tggcggctag tgatacagag
 60
 cgagatggac tagccccaga aaagacatca ccagatagag ataagaaaaa agagcagtca
 120
 gaagtatctg tttctcctag agcttcaaaa catcattatt caagatcacg atcaagggtca
 180
 agagaaagaa aacgaaagtc agataatgaa ggaagaaaac acaggagccg gagcagaagc
 240
 aaagagcgtg cttatgcgcg aagagactga actgaagacg ctgcagactc agatagcaaa
 300
 ataataagcc tacttcatga tnnaagaacc aacttcttct taaaacaggg aagaagacat
 360
 gaatccaaag ataaatcctc taagaaacat aagtctgagg aacataatga caaagaacat
 420
 tcttctgata aaggaagaga gcgactaaat tcatctgaaa atgggtgagga caggcacaaa
 480
 cgcaaagaaa gaaagtcatc aagaggcaga agtcactcaa gatctagggtc tcgtgaaaga
 540
 cgccatcgta gtagaagcag ggagcggaag aagtctcgat ccaggagtag ggagcggaag
 600
 aaatcgagat ccagaagcag agagaggaag aaatcgagat ccagaagcag ggaaagaaaa
 660
 cggcgatca ggtctcggtc ccgctcaaga tcaagacaca ggcataggac tagaagcagg
 720

agtaggacaa ggagtaggag tcgagataga aagaagagaa ttgaaaagcc gagaagattt
780
agcagaagtt taagccggac tccaagtcca cctcccttca gaggcagaaa cacagcaatg
840
gatgcacagg aagctttagc tagaagggtg gaaagggcaa agaaattaca agaacagcga
900
gaaaaggaaa tggttgaaaa acaaaaacaa caagaaatag ctgcagcagc tgcagctact
960
ggaggttctg ttctcaatgt tgctgccctg ttggcatcag gaacacaagt aacacctcag
1020
atagccatgg cagctcagat ggcagccctg caagctaaag ctttggcaga gacaggaata
1080
gctgttccta gctactataa cccagccgct gttaatccaa tgaaatttgc tgaacaagag
1140
aaaaaaaggga aaatgctttg gcagggcaag aaagaagggg acaaatccca atctgctgaa
1200
atatgggaaa aattgaattt tggaaacaag gaccaaattg tcaaatttag gaaattgatg
1260
ggtattaaga gtgaagatga agctggatgt agctcagttg atgaagaaaag ttacaagact
1320
ctgaagcagc aggaagaagt atttcgaaat ttagatgctc agtatgaaat ggcaagatca
1380
caaaccacaca cacaagagg aatgggtttg ggtttcacat cttcaatgcg aggaatggat
1440
gcagtttgaa aatgatcaca cttgtaaagt ttgggactta tagacttctt gttctgatgt
1500
cacgtccttg ttcaccaaac agctagcact ctagcttgca tgggtgttgc attgacttta
1560
atttattgaa aaatacaaat ttttgtaa atcagatcag tgatactggg gttagtgttg
1620
taatcaggtt aaaccactt ccattaaact tgacaggact atagaaggat aatatttttt
1680
agttcatgaa ttctactttt caaatatata aaagctgcag gtgggggataa aatctcatac
1740
atggattttt tcgtgtccgc tgtcttgtgt acttttgtac ttaaccttgt acagttattt
1800
tcctctcttg aaacatgaaa gaaatgttat gtagatgttc tttagaagat ctggccattt
1860
ggtacataat ccagcacaga taagctgggt ggtaatgata ataaaaatgg ttttctcaaa
1920
actggtgtta atttaagtta cctgggatgt ttctttgaat ttgttttata gtttctgtag
1980
catttggtgaa ttgctgttag aaaacactag ctagaaatcc cctccccacc acccttttta
2040
aggccagtta actatactac agtcaatacc gtggtgagca aaaatgtaaa aggtggaagg
2100
agaaaactta ctaaaatagt atgttttcct attataaggg acagacttgg tattcagtat
2160
ttgtcaaata ttacatgtgt tattcaggag atagattaat gcattaaagg gatgtaagca
2220
cttttatttt aataaagtgc cttataacaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2280
aaa
2283

<210> 5948
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 5948
 Met Ala Ala Ser Asp Thr Glu Arg Asp Gly Leu Ala Pro Glu Lys Thr
 1 5 10 15
 Ser Pro Asp Arg Asp Lys Lys Lys Glu Gln Ser Glu Val Ser Val Ser
 20 25 30
 Pro Arg Ala Ser Lys His His Tyr Ser Arg Ser Arg Ser Arg Ser Arg
 35 40 45
 Glu Arg Lys Arg Lys Ser Asp Asn Glu Gly Arg Lys His Arg Ser Arg
 50 55 60
 Ser Arg Ser Lys Glu Arg Ala Tyr Ala Arg Arg Asp
 65 70 75

<210> 5949
 <211> 4706
 <212> DNA
 <213> Homo sapiens

<400> 5949
 nggcggtagt gcgtcggctg ctgcccgggt ctggcagaac tcgggtgttt tgggctgaga
 60
 cagtggcagc tgcggccccc accccaagtg cggggacctc cggcgaataa aggtcggcct
 120
 gcgggtaggc cggtagggcc tgcggtccgg cctgcgggag aactgggtcg tcagtctctc
 180
 gagtgggtggg gctggggact ttgagggagt tggctctagg gcacagtccc tgcttgcca
 240
 ggtcggagga acaagtgcct ggatctggcg tgtgtgctcc aggggctctt tccgcggccc
 300
 tttccacctc ttttcacttt ggggacggta ggcctttata aacggactaa tgctgggtga
 360
 tttgttctcg tggttgttga tgccgaggaa agactctggg ccccgaggact cacctaaact
 420
 ggagttcgaa tactgttcgc tcgctgtgtg accttgga aaataacaag cttttctgaa
 480
 gtgagaagct gttctcagcc acgagtcctg tgcaagatca ctaatgatta cctggcattt
 540
 ctgcgacaca ggcaggtcct cagggtttgt gcaagtttgc aaacatgttc accctgtctc
 600
 agacctcgag agcatgggtc atcgatagag cccgtcaggc acgagaagaa aggcttgtgc
 660
 agaaggaacg ggagcgggca gctgttgtga tccaggccca tgtccggagt tttctctgtc
 720
 ggagtcgact gcagagagat atcaggagag agattgatga cttttttaaa gcagatgacc
 780
 ctgagtccac taaaagaagt gcactttgta ttttcaagat tgccaggaaa ctgctgttcc
 840
 tattcagaat caaagaggat aatgagagat ttgagaagtt gtgtcgcagc atcctgagca
 900

gcattggatgc tgagaatgag cctaagggtgt ggtatgtgtc cctggcttgt tctaaggacc
960
tcaccctcct ttggattcaa cagatcaaga acattttgtg gtactgctgt gattttctca
1020
agcagctcaa gcctgaaatc ctgcaggact cccgactcat caccctgtac ctcacgatgc
1080
ttgtcacctt cacagacact tcaacgtgga aaattcttcg gggaaaagggt gaaagtcttc
1140
gaccagcgat gaaccacatt tgtgcaaata taatgggaca tctcaaccag catggatttt
1200
attctgtgct gcagatattg ttaaccctgt gcctggcaag acccctcct tgtctatcca
1260
aaggcacttt aacagcagct ttttctctag cgttacgccc tgtgattgct gcacagttct
1320
cagacaatct gattcggccg ttctcatcc acatcatgtc tgtgctgct ctggtgactc
1380
atctcagcac agtgaccct gagcgctca ctgttttaga atcccatgac atgcttcgta
1440
aattcatcat atttttaaga gaccaagatc gatgccgtga tgtatgtgaa agtttagaag
1500
gatgccatac gctttgtcta atgggcaacc tcctacactt gggctccctc agccccagag
1560
tgtagagga ggagacagat gggttcgtga gtttgtcac ccagacgctg tgctactgtc
1620
ggaagtatgt gtctcagaag aagtccaacc tgaccactg gcacctgtc cttggctggt
1680
tctccaatc tgtggattat ggccttaacg agtcaatgca cttgatcacc aaacagctgc
1740
agttcttgtg gggggtgcct ctgatccgga tcttctctg tgacatcctg agcaagaagc
1800
tactggagag ccaggagcca gccacgcac agccagcatc ccctcagaat gtgctccag
1860
tgaagagtct cctaaagcgt gcttttcaaa agtcggcatc agtccggaat attctcaggc
1920
ctgtcggggg taaacgggtc gactctgcag aagtccagaa ggtttgcaac atctgtgtcc
1980
tctaccagac ctgctgaca actctcacac agattcggct gcagatactc acaggtctca
2040
cttaccttga tgacctgctt cccaaactgt gggcatttat ctgtgagctc gggccccacg
2100
gagggttaaa gctcttcttg gaatgcctga acaatgacac tgaagagtcc aagcaactct
2160
tgccatgct gatgctgttc tgtgactgtt cgcggcacct catcacaatc cttgatgaca
2220
ttgaagtta tgaagaacag atttcattca aactggaaga gctggctact atctcctctt
2280
tcctgaattc ttttgtgttt aagatgatct gggatggaat ttagagaaac gccaagggtg
2340
agaccttga gctgttccag tctgtccacg ggtggcttat ggtgctgtac gagcgggact
2400
gccggcggcg cttcaccctc gaggaccact ggctgcgaaa ggatctcaaa cctagcgtgc
2460
tcttccaaga actcgacagg gacagaaaac gggcacagtt gatcctgcag tacatccac
2520

atgtcatccc tcacaaaaac agagttctac tgtttcgaac catggttacc aaggagaagg
2580
agaaactggg gctggtggaa accagctctg cctccccgca tgtcactcac atcaccatcc
2640
gccggtccag gatgctggag agcttgtttg agtgcccctg gccactggtg atcaatgccg
2700
agagctgcta ggaaggcagt gtgtgctgaa cagtggatgt ttctgacatt cttcaaggac
2760
ggctacgagc agcttaggca gctctcccag cacgccatga aggggggtcat ccgtgtgaag
2820
tttgtcaatg acctcggggt ggacgaagca gggattgatc aagacggtgt ttttaaggag
2880
ttcttggaag agatcatcaa gagagttttt gaccagcac tcaatctgtt caagacaacc
2940
agtggggatg agaggctgta cccctcacc acatcctaca tccatgagaa ttacctgcag
3000
ctcttcgagt ttgtggggaa gatgctgggg aaggctgtgt atgagggaat tgtggtggac
3060
gtgccatttg catccttctt cctgagccaa ctgcttgggc accaccacag cgtcttctat
3120
agctcggtggt atgaactgcc ttctctggac tccgagttct ataaaaacct cacctccatc
3180
aagcgctatg atggggacat cactgacctg ggctgacgc tgtcttacga cgaggacgtc
3240
atgggtcagc ttgtttgcca tgaactgatt cctggaggga agaccattcc tgttaciaaat
3300
gaaaataaaa ttagctacat ccatctgatg gcacattttc gaatgcacac tcaaataaaa
3360
aaccaaacag ctgccctcat tagcggattc cgttccatta tcaaaccoga gtggatccga
3420
atgttctcaa ctctgaact gcagcgtctc atctctggcg acaatgctga gattgatctg
3480
gaagatttaa agaagcacac agtctactac ggtggtttcc atggaagtca cagagtcac
3540
atctggctct gggatattct ggctccgac ttcacaccgg atgagagagc tatgtttctg
3600
aagttcgtga ccagctgctc cagacccccg ctctgggat tcgcctacct caagcctcca
3660
ttctccatcc gctgcgtgga ggtgtcggac gatcaggaca ccggggacac tctgggcagc
3720
gtcctccggg gcttcttcac catccgcaag cgggagccag gcggccgcct gccacctcc
3780
tccacctgct tcaacctgct caagctgccc aactacagca agaagagcgt cctccgcgag
3840
aagctgcgt acgcatcag catgaacacg ggctttgaac tctcttagct cctgtcccag
3900
ccctgectcc agggctcctg ggctgccagg gaccttcagc tcccagaggc agtgtggtcc
3960
tggaatgtg accaacaatgc caggtgacat tggcccctag accctctcta tagccatgag
4020
actccttggt gcctcaagaa atttagacgc ccacgacagc actacacagc atctccagg
4080
gatgcccaag gcacagggct gcagaaaata aacctccaga ttccaccaac acgggtccat
4140

tcttcctggg gatggcagag gggcttcttt tagctagttt gatcttttgg gagtctgtct
 4200
 ttccttagcc gtctgagtga gctgtgtatg aacaagtccc aggagttcca agagtctaga
 4260
 gtgggttttg cagcatgggt tgagtgtaca aagcctactg tgcgtgagat cctctccttc
 4320
 cgtttctgaa atctcttact caggtaaggc ctgcgcaagc ctctatgcac cccacaaagt
 4380
 ttctgcctcc atgccgtcca cagcgctctt tcccagacag ccaggcccat ctgctgcca
 4440
 gggaagcgca ggcgcctgct agggacgcta tggacaccgt gagtccaagg cgctgctcct
 4500
 gccttgaagc cagcgctcc acgcgcgggc cctccattt tctgcgtcct cagcgggctg
 4560
 agctgccaga gagtcttccc ggacctattc ccgtcctatg cattcacatt ggcacctgg
 4620
 tttgggggaa gaaaaacaac ggcccttagc agcagccccg tttccagaat gtgctgcctg
 4680
 ttccccaaag cctgcttgtc ccgcgg
 4706

<210> 5950

<211> 397

<212> PRT

<213> Homo sapiens

<400> 5950

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Arg | Ala | Ala | Arg | Lys | Ala | Val | Cys | Ala | Glu | Gln | Trp | Met | Phe |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Thr | Phe | Phe | Lys | Asp | Gly | Tyr | Glu | Gln | Leu | Arg | Gln | Leu | Ser | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Ala | Met | Lys | Gly | Val | Ile | Arg | Val | Lys | Phe | Val | Asn | Asp | Leu | Gly |
| | | 35 | | | | 40 | | | | | | 45 | | | |
| Val | Asp | Glu | Ala | Gly | Ile | Asp | Gln | Asp | Gly | Val | Phe | Lys | Glu | Phe | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Glu | Ile | Ile | Lys | Arg | Val | Phe | Asp | Pro | Ala | Leu | Asn | Leu | Phe | Lys |
| 65 | | | | 70 | | | | 75 | | | | | | 80 | |
| Thr | Thr | Ser | Gly | Asp | Glu | Arg | Leu | Tyr | Pro | Ser | Pro | Thr | Ser | Tyr | Ile |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| His | Glu | Asn | Tyr | Leu | Gln | Leu | Phe | Glu | Phe | Val | Gly | Lys | Met | Leu | Gly |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Lys | Ala | Val | Tyr | Glu | Gly | Ile | Val | Val | Asp | Val | Pro | Phe | Ala | Ser | Phe |
| | 115 | | | | | 120 | | | | | | 125 | | | |
| Phe | Leu | Ser | Gln | Leu | Leu | Gly | His | His | His | Ser | Val | Phe | Tyr | Ser | Ser |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Val | Asp | Glu | Leu | Pro | Ser | Leu | Asp | Ser | Glu | Phe | Tyr | Lys | Asn | Leu | Thr |
| 145 | | | | 150 | | | | | 155 | | | | | 160 | |
| Ser | Ile | Lys | Arg | Tyr | Asp | Gly | Asp | Ile | Thr | Asp | Leu | Gly | Leu | Thr | Leu |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Ser | Tyr | Asp | Glu | Asp | Val | Met | Gly | Gln | Leu | Val | Cys | His | Glu | Leu | Ile |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Pro | Gly | Gly | Lys | Thr | Ile | Pro | Val | Thr | Asn | Glu | Asn | Lys | Ile | Ser | Tyr |
| | 195 | | | | | 200 | | | | | | 205 | | | |
| Ile | His | Leu | Met | Ala | His | Phe | Arg | Met | His | Thr | Gln | Ile | Lys | Asn | Gln |

```

      210                215                220
Thr Ala Ala Leu Ile Ser Gly Phe Arg Ser Ile Ile Lys Pro Glu Trp
225                230                235                240
Ile Arg Met Phe Ser Thr Pro Glu Leu Gln Arg Leu Ile Ser Gly Asp
      245                250                255
Asn Ala Glu Ile Asp Leu Glu Asp Leu Lys Lys His Thr Val Tyr Tyr
      260                265                270
Gly Gly Phe His Gly Ser His Arg Val Ile Ile Trp Leu Trp Asp Ile
      275                280                285
Leu Ala Ser Asp Phe Thr Pro Asp Glu Arg Ala Met Phe Leu Lys Phe
      290                295                300
Val Thr Ser Cys Ser Arg Pro Pro Leu Leu Gly Phe Ala Tyr Leu Lys
305                310                315                320
Pro Pro Phe Ser Ile Arg Cys Val Glu Val Ser Asp Asp Gln Asp Thr
      325                330                335
Gly Asp Thr Leu Gly Ser Val Leu Arg Gly Phe Phe Thr Ile Arg Lys
      340                345                350
Arg Glu Pro Gly Gly Arg Leu Pro Thr Ser Ser Thr Cys Phe Asn Leu
      355                360                365
Leu Lys Leu Pro Asn Tyr Ser Lys Lys Ser Val Leu Arg Glu Lys Leu
      370                375                380
Arg Tyr Ala Ile Ser Met Asn Thr Gly Phe Glu Leu Ser
385                390                395

```

<210> 5951

<211> 1724

<212> DNA

<213> Homo sapiens

<400> 5951

```

ngaaatcttg tataccgccc gcgagaagaa gccgatcgag cctttgtctg gaaagtcagc
60
atctccggct ccggctgcaa tgtgttctctg gtgacattag catcgggcag acccgccagg
120
agaggagggg tcgccagggt cccgtctgct ttcggaggcg gatcgagcgg gtgacttttg
180
tgcattcggt ttaatttttg gaaatctctc ttttttctc cctcgctcgc tgcggggcat
240
gtcctgatct ggcggccgct cctaccaccc tgggcagccg agcagagtgg tccccagcgg
300
tctccctccc tgctccctg actttgcaac accgcgttcc gggaggaccg gcctcggcga
360
gggaggaggc gggggagctg cgaacaccca gacccaaacc ctgacatgct ctggggcgga
420
gaggaggaag ccaggagctg agcgcgcgcg gtgggctgct tcgcccctcg gctccgagcg
480
ccgggctccg ggcgcctg cctgcgcctg ggcagcagcc ttgctggtct tgggggcgcc
540
ccccgcttcc cgcccggggg gttcgcggcc ggcaggacca tgctgctgaa agagtaccgg
600
atctgcatgc cgctcaccgt agacgagtac aaaattggac agctgtacat gatcagcaaa
660
cacagccatg aacagagtga ccggggagaa ggggtggagg tcgtccagaa tgagcccttt
720

```

gaggaccctc accatggcaa tgggcagttc accgagaagc ggggtgtatct caacagcaaa
 780
 ctgcctagtt gggctagagc tgttgtcccc aaaatatattt atgtgacaga gaaggcttgg
 840
 aactattatc cctacacaat tacagaatac acatgttcct ttctgccgaa attctccatt
 900
 catatagaaa ccaagtatga ggacaacaaa ggaagcaatg acaccatttt cgacaatgaa
 960
 gccaaagacg tggagagaga agtttgcttt attgatattg cctgcgatga aattccagag
 1020
 cgctactaca aagaatctga ggatcctaag cacttcaagt cagagaagac aggacgggga
 1080
 cagttgaggg aaggctggag agatagtcac cagcctatca tgtgctccta caagctgggtg
 1140
 actgtgaagt ttgaggtctg ggggcttcag accagagtgg aacaatttgt acacaagggtg
 1200
 gtccgagaca ttctgctgat tggacataga caggcttttg catgggttga tgagtgggtat
 1260
 gacatgacaa tggatgaagt ccgagaattt gaacgagcca ctcaggaagc caccaacaag
 1320
 aaaatcggca ttttcccacc tgcaatttct atctccagca tccccctgct gccttcttcc
 1380
 gtccgcagtg cgccttctag tgctccatcc acccctctct ccacagacgc acccgaattt
 1440
 ctgtccgttc ccaaagatcg gccccggaaa aagtctgccc cagaaactct cacacttcca
 1500
 gaccctgaga aaaaagccac cctgaattta cccggcatgc actcttcaga taagccatgt
 1560
 cggcccaa at ctgagtaact ttatataaat atctcatggg gttttatatt ttcatttgtt
 1620
 gttgttgttt ttttttaaga atcttctgat agagaaaaag actgctttgt cactcaaaca
 1680
 tgttccttcg accttaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 1724

<210> 5952

<211> 378

<212> PRT

<213> Homo sapiens

<400> 5952

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Arg | Val | Gly | Cys | Phe | Ala | Leu | Arg | Leu | Arg | Ala | Pro | Gly | Ser |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Gly | Arg | Pro | Ala | Leu | Arg | Leu | Gly | Ser | Ser | Leu | Ala | Gly | Leu | Gly | Gly |
| | | | 20 | | | | 25 | | | | | 30 | | | |
| Ala | Pro | Arg | Phe | Pro | Pro | Gly | Gly | Phe | Ala | Ala | Gly | Arg | Thr | Met | Leu |
| | | | 35 | | | 40 | | | | | 45 | | | | |
| Leu | Lys | Glu | Tyr | Arg | Ile | Cys | Met | Pro | Leu | Thr | Val | Asp | Glu | Tyr | Lys |
| | 50 | | | | 55 | | | | | 60 | | | | | |
| Ile | Gly | Gln | Leu | Tyr | Met | Ile | Ser | Lys | His | Ser | His | Glu | Gln | Ser | Asp |
| 65 | | | | 70 | | | | 75 | | | | 80 | | | |
| Arg | Gly | Glu | Gly | Val | Glu | Val | Val | Gln | Asn | Glu | Pro | Phe | Glu | Asp | Pro |
| | | | 85 | | | | 90 | | | | | 95 | | | |
| His | His | Gly | Asn | Gly | Gln | Phe | Thr | Glu | Lys | Arg | Val | Tyr | Leu | Asn | Ser |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | | | | | |
| Lys | Leu | Pro | Ser | Trp | Ala | Arg | Ala | Val | Val | Pro | Lys | Ile | Phe | Tyr | Val |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Thr | Glu | Lys | Ala | Trp | Asn | Tyr | Tyr | Pro | Tyr | Thr | Ile | Thr | Glu | Tyr | Thr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Cys | Ser | Phe | Leu | Pro | Lys | Phe | Ser | Ile | His | Ile | Glu | Thr | Lys | Tyr | Glu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Asp | Asn | Lys | Gly | Ser | Asn | Asp | Thr | Ile | Phe | Asp | Asn | Glu | Ala | Lys | Asp |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Val | Glu | Arg | Glu | Val | Cys | Phe | Ile | Asp | Ile | Ala | Cys | Asp | Glu | Ile | Pro |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Glu | Arg | Tyr | Tyr | Lys | Glu | Ser | Glu | Asp | Pro | Lys | His | Phe | Lys | Ser | Glu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Lys | Thr | Gly | Arg | Gly | Gln | Leu | Arg | Glu | Gly | Trp | Arg | Asp | Ser | His | Gln |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Pro | Ile | Met | Cys | Ser | Tyr | Lys | Leu | Val | Thr | Val | Lys | Phe | Glu | Val | Trp |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Gly | Leu | Gln | Thr | Arg | Val | Glu | Gln | Phe | Val | His | Lys | Val | Val | Arg | Asp |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Ile | Leu | Leu | Ile | Gly | His | Arg | Gln | Ala | Phe | Ala | Trp | Val | Asp | Glu | Trp |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Tyr | Asp | Met | Thr | Met | Asp | Glu | Val | Arg | Glu | Phe | Glu | Arg | Ala | Thr | Gln |
| | | 275 | | | | 280 | | | | | | 285 | | | |
| Glu | Ala | Thr | Asn | Lys | Lys | Ile | Gly | Ile | Phe | Pro | Pro | Ala | Ile | Ser | Ile |
| | 290 | | | | 295 | | | | | | 300 | | | | |
| Ser | Ser | Ile | Pro | Leu | Leu | Pro | Ser | Ser | Val | Arg | Ser | Ala | Pro | Ser | Ser |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Ala | Pro | Ser | Thr | Pro | Leu | Ser | Thr | Asp | Ala | Pro | Glu | Phe | Leu | Ser | Val |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Pro | Lys | Asp | Arg | Pro | Arg | Lys | Lys | Ser | Ala | Pro | Glu | Thr | Leu | Thr | Leu |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Pro | Asp | Pro | Glu | Lys | Lys | Ala | Thr | Leu | Asn | Leu | Pro | Gly | Met | His | Ser |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Ser | Asp | Lys | Pro | Cys | Arg | Pro | Lys | Ser | Glu | | | | | | |
| | 370 | | | | | 375 | | | | | | | | | |

<210> 5953

<211> 777

<212> DNA

<213> Homo sapiens

<400> 5953

tttcggcacg aggcccgag tctgaagagg tctccgcgcc gctccctgta caaactggtg
60

ggctcgccgc cttggaaaga ggctttccgg cagagatgcc tggagagaat gagaaacagc
120

cgggacaggc tctaaacag gtaccgccag ctgngaagca gtgggccagg gaattctcag
180

aacagctttc tagttcaaga ggtgatggaa gaagagtgga atgctttgca gtcagtggag
240

aattgtccag aagacttggc tcagctggag gagctgatag acatggctgt gctggaggaa
300

attcaacagg agctgatcaa ccaagagcag tccatcatca gcgagtatga gaagagcttg
360

cagtttgatg aaaagtgtct cagcatcatg ctggctgagt gggaggcaaa cccactcatc
 420
 tgtcctgtat gtacaaagcc tgtgatactt gggctgtgat cctctagagc cagcttggac
 480
 tcacatcatt ctatgggggtt gaagacaact cattccctct gaggagcctt gtacatacaa
 540
 gccttttatt tataacttat tttgtattga aactttttaa caatactgaa gaaaaaaaaa
 600
 cttttccgac atctgttctt ggtcttttgt gacgcagggt gaagggggag gaatagaaaa
 660
 agacaaactg ccttggagga gataaaccaa ttttatgtct atcatgttat acaaaaatct
 720
 agaaataata gatttgtaca gaaaaaatg ataataaatg agaacacaaa acatata
 777

<210> 5954

<211> 152

<212> PRT

<213> Homo sapiens

<400> 5954

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Arg | His | Glu | Ala | Arg | Ser | Arg | Lys | Arg | Ser | Pro | Arg | Arg | Ser | Leu |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Tyr | Lys | Leu | Val | Gly | Ser | Pro | Pro | Trp | Lys | Glu | Ala | Phe | Arg | Gln | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Cys | Leu | Glu | Arg | Met | Arg | Asn | Ser | Arg | Asp | Arg | Leu | Leu | Asn | Arg | Tyr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | Gln | Leu | Xaa | Ser | Ser | Gly | Pro | Gly | Asn | Ser | Gln | Asn | Ser | Phe | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Gln | Glu | Val | Met | Glu | Glu | Glu | Trp | Asn | Ala | Leu | Gln | Ser | Val | Glu |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Asn | Cys | Pro | Glu | Asp | Leu | Ala | Gln | Leu | Glu | Glu | Leu | Ile | Asp | Met | Ala |
| | | | | 85 | | | | 90 | | | | | 95 | | |
| Val | Leu | Glu | Glu | Ile | Gln | Gln | Glu | Leu | Ile | Asn | Gln | Glu | Gln | Ser | Ile |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ile | Ser | Glu | Tyr | Glu | Lys | Ser | Leu | Gln | Phe | Asp | Glu | Lys | Cys | Leu | Ser |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ile | Met | Leu | Ala | Glu | Trp | Glu | Ala | Asn | Pro | Leu | Ile | Cys | Pro | Val | Cys |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Thr | Lys | Pro | Val | Ile | Leu | Gly | Leu | | | | | | | | |
| 145 | | | | | 150 | | | | | | | | | | |

<210> 5955

<211> 1459

<212> DNA

<213> Homo sapiens

<400> 5955

nncaattgga ctgcattatc aaacacatgt gctatgtaca tcttcagtgc acctgccagc
 60
 agatatcctg gagggctcat gagtgaattt agtccaagat ttaaagccct gccccagggt
 120
 gctcagcctg tgatctgtat ccactcagca tgcacttggg cagatgattt gtctgtgtgc
 180

tacccttccc cccatattac catacatatg cacggcggga ccagcagcga cggtagcagc
 240
 agcatggccg cgatctatgg ggggtgtagag gggggaggca cacgatccga ggtcctttta
 300
 gtctcagagg atgggaagat cctggcagaa gcagatggac tgagcacaaa ccactggctg
 360
 atcgggacag acaagtgtgt ggagaggatc aatgagatgg tgaacagggc caaacggaaa
 420
 gcaggggtgg atcctctggt accgctgcga agcttgggcc tatctctgag cggtggggac
 480
 caggaggacg cggggaggat cctgatcgag gagctgaggg accgatttcc ctacctgagt
 540
 gaaagctact taatcaccac cgatgccgcc ggctccatcg ccacagctac accggatggt
 600
 ggagttgtgc tcatatctgg aacaggctcc aactgcaggc tcatcaaccc tgatggctcc
 660
 gagagtggct gcggcggctg gggccatatg atgggtgatg agggttcagc cctctctgct
 720
 ccctcagcct actggatcgc acaccaagca gtgaaaatag tgtttgactc cattgacaac
 780
 ctagaggcgg ctccctcatga tatcggctac gtcaaacagg ccatgttcca ctatttccag
 840
 gtgccagatc ggctagggat actcactcac ctgtataggg actttgataa atgcaggttt
 900
 gctgggtttt gccggaaaat tgcagaaggt gctcagcagg gagaccccct ttcccgtat
 960
 atcttcagga aggctgggga gatgctgggc agacacatcg tagcagtgtt gcccagatt
 1020
 gacccggtct tgttcaggga caagattgga ctcccatcc tgtgcgtggg ctctgtgtgg
 1080
 aagagctggg agctgctgaa ggaaggtttt cttttggcgc tgaccaggg cagagagatc
 1140
 caggctcaga actttctctc cagcttcacc ctgatgaagc tgaggcactc ctccgctctg
 1200
 ggtggggcca gcctaggggc caggcacatc gggcacctcc tccccatgga ctatagcgcc
 1260
 aatgccattg ctttctattc ctacaccttt tcctaggggg ctggtcccgg ctccaccccc
 1320
 tccaagctca gtggacactg ggtctgaaag gaaggagtct tttgcttctt ttctcctttt
 1380
 taaaaaaca aacatagaag aaaataaatg cactttatcc actcccaaaa aaaaaaaaaa
 1440
 aaaaaaaaaa aagtcgacg
 1459

<210> 5956

<211> 431

<212> PRT

<213> Homo sapiens

<400> 5956

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Asn | Trp | Thr | Ala | Leu | Ser | Asn | Thr | Cys | Ala | Met | Tyr | Ile | Leu | Ser |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Ala | Pro | Ala | Ser | Arg | Tyr | Pro | Gly | Gly | Leu | Met | Ser | Glu | Phe | Ser | Pro |

```
<210> 5957
<211> 855
```

<212> DNA

<213> Homo sapiens

<400> 5957

atggcggagt cgttgaggtc tccgcgccgc tccctgtaca aactgggtggg ctgcgccgct
 60
 tggaaagagg ctttccggca gagatgcctg gagagaatga gaaacagccg ggacaggctc
 120
 ctaaacaggt accgccaggc tggaagcagt gggccaggga attctcagaa cagctttcta
 180
 gttcaagagg tgatggaaga agagtggaat gctttgcagt cagtggagaa ttgtccagaa
 240
 gacttggctc agctggagga gctgatagac atggctgtgc tggaggaaat tcaacaggag
 300
 ctgatcaacc aaggcctgtg atacttgggc tgtgatcctc tagagccagc ttggactcac
 360
 atcattctat ggggttgaag acaactcatt ccctctgagg agccttgtac atacaagcct
 420
 tttatttata acttattttg tattgaaact tttaaacaat actgaagaaa aaaaaacttt
 480
 tccgacatct gttcttggtc ttttgtgaca caggttgaag ggggaggaat agaaaaagac
 540
 aaactgcctt ggaggagata aaccaatttt atgtctatca tgttatacaa aaatctagaa
 600
 ataatagatt tgtacagaaa aaaatgataa taaatgagag cacaaaacat ataattttaa
 660
 tctggatatt tttcccccat gatattagga tgataatcat ttcaaagcac atgtctagct
 720
 tcagagtagg atttgttcac tggccaaagc ctgccatgaa actatggctt tcagcatctg
 780
 tctgctctac tggctcttga caaaactctt gaggtcttca agaaaagtaa tgtactcctg
 840
 gtgctccagg gctgt
 855

<210> 5958

<211> 106

<212> PRT

<213> Homo sapiens

<400> 5958

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Glu | Ser | Leu | Arg | Ser | Pro | Arg | Arg | Ser | Leu | Tyr | Lys | Leu | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Ser | Pro | Pro | Trp | Lys | Glu | Ala | Phe | Arg | Gln | Arg | Cys | Leu | Glu | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Met | Arg | Asn | Ser | Arg | Asp | Arg | Leu | Leu | Asn | Arg | Tyr | Arg | Gln | Ala | Gly |
| | | 35 | | | | | 40 | | | | 45 | | | | |
| Ser | Ser | Gly | Pro | Gly | Asn | Ser | Gln | Asn | Ser | Phe | Leu | Val | Gln | Glu | Val |
| | | 50 | | | | 55 | | | | 60 | | | | | |
| Met | Glu | Glu | Glu | Trp | Asn | Ala | Leu | Gln | Ser | Val | Glu | Asn | Cys | Pro | Glu |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Asp | Leu | Ala | Gln | Leu | Glu | Glu | Leu | Ile | Asp | Met | Ala | Val | Leu | Glu | Glu |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Ile | Gln | Gln | Glu | Leu | Ile | Asn | Gln | Gly | Leu | | | | | | |

100

105

<210> 5959

<211> 830

<212> DNA

<213> Homo sapiens

<400> 5959

gatgagaaga ttcagccaat attagacaaa gtaggctctt tggtaaacgc aaggcttgaa
60
ttttctcggg gccttatgat gctgggtctt gagaagttag ccactgatat tccttgtctg
120
ctatatgatg acaatctctt ctgtcatttg gtggatgaag tactcttggt tgaaagggag
180
ctacacagtg ttcattggcta tcctggcact tttgctaatt gtatgcatat tctatcagag
240
gaaacctgtt ttcaaagatg ggtgacgggg gagagaaaat ttgctcttca aaaaatggac
300
tcaatgcttt cctcagaagc tgcctgggta tcgcaatata aggatatcac tgacgtggat
360
gaaatgaaag ttccagattg tgcagaaact tttatgactc tactcttggt tataactgac
420
aggtataaaa atcttccac agcttccga aagcttcagt tcctggagtt acagaaggac
480
ttagtagatg attttaggat acgattaaca caagtgatga aagaagagac tagagcttcc
540
cttggctttc gatactgtgc aattcttaat gctgtgaact acatctcaac agtactagca
600
gattgggctg acaatgtttt ctttctacaa cttcaacagg ctgcactgga ggtgtttgca
660
gagaataata ctctgagtaa attgcagcta ggacagctag cctctatgga gagctctgtc
720
tttgatgaca tgattaacct cttagaacgt ttaaagcatg atatgttgac ccgtcaagta
780
gaccacgttt ttagagaagt taaagatgct gcaaaattgt ataaaaaaga
830

<210> 5960

<211> 251

<212> PRT

<213> Homo sapiens

<400> 5960

Met Met Leu Val Leu Glu Lys Leu Ala Thr Asp Ile Pro Cys Leu Leu
1 5 10 15
Tyr Asp Asp Asn Leu Phe Cys His Leu Val Asp Glu Val Leu Leu Phe
20 25 30
Glu Arg Glu Leu His Ser Val His Gly Tyr Pro Gly Thr Phe Ala Asn
35 40 45
Cys Met His Ile Leu Ser Glu Glu Thr Cys Phe Gln Arg Trp Val Thr
50 55 60
Gly Glu Arg Lys Phe Ala Leu Gln Lys Met Asp Ser Met Leu Ser Ser
65 70 75 80
Glu Ala Ala Trp Val Ser Gln Tyr Lys Asp Ile Thr Asp Val Asp Glu

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | | | 85 | | | | 90 | | | | | 95 | | | |
| Met | Lys | Val | Pro | Asp | Cys | Ala | Glu | Thr | Phe | Met | Thr | Leu | Leu | Leu | Val | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Ile | Thr | Asp | Arg | Tyr | Lys | Asn | Leu | Pro | Thr | Ala | Ser | Arg | Lys | Leu | Gln | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Phe | Leu | Glu | Leu | Gln | Lys | Asp | Leu | Val | Asp | Asp | Phe | Arg | Ile | Arg | Leu | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Thr | Gln | Val | Met | Lys | Glu | Glu | Thr | Arg | Ala | Ser | Leu | Gly | Phe | Arg | Tyr | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Cys | Ala | Ile | Leu | Asn | Ala | Val | Asn | Tyr | Ile | Ser | Thr | Val | Leu | Ala | Asp | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Trp | Ala | Asp | Asn | Val | Phe | Phe | Leu | Gln | Leu | Gln | Gln | Ala | Ala | Leu | Glu | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Val | Phe | Ala | Glu | Asn | Asn | Thr | Leu | Ser | Lys | Leu | Gln | Leu | Gly | Gln | Leu | |
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Ala | Ser | Met | Glu | Ser | Ser | Val | Phe | Asp | Asp | Met | Ile | Asn | Leu | Leu | Glu | |
| | 210 | | | | | 215 | | | | | 220 | | | | | |
| Arg | Leu | Lys | His | Asp | Met | Leu | Thr | Arg | Gln | Val | Asp | His | Val | Phe | Arg | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | |
| Glu | Val | Lys | Asp | Ala | Ala | Lys | Leu | Tyr | Lys | Lys | | | | | | |
| | | | | 245 | | | | | 250 | | | | | | | |

```
<210> 5961
<211> 585
<212> DNA
<213> Homo sapiens
```

```

<400> 5961
gctcgggggct gcagtgcgct ctaatggtgc ctgtgaataa ccaactgcatt cagcctgggc
60
aatgaagcga gaccccgctct ctaaaaaaaa aattgagggg tcaaagagga tgccaaactt
120
aattagagac tgagacaggg caggggtgcc aggtgtctgc atgcgtttca tgtggatgcc
180
cgtgtctatt ctggcctgct cctggggccc ctccccactc agccctggct gatgagaatg
240
ggacagggac tcccttctcg tgtccctgtg cagcgtcggc ccaggaggta gcagagcagt
300
atatgcacat ctgggtgtgc cctcctgcat gtccccacac atctgtcatt cctgtctttg
360
cacacctatg tgactccgc atgttttgtgt cttatgtgt cccatgcatg ctccccatct
420
gaccttgctg gttctcgct gtctgtgtgc ggccagtcct gccttcactc tctcatgggt
480
ggccctggca gcatgtctgg ctcccagca ggtgagctca ggagataaga tggaagatgc
540
aacagccaat ggtcaagaag actccaaggc ccagatggg tccac
585

```

```
<210> 5962
<211> 114
<212> PRT
<213> Homo sapiens
```

<400> 5962

```

Met Cys Gly Asp Met Gln Glu Gly Thr Pro Arg Cys Ala Tyr Thr Ala
 1           5           10           15
Leu Leu Pro Pro Gly Pro Thr Leu His Arg Asp Thr Arg Arg Glu Ser
 20           25           30
Leu Ser His Ser His Gln Pro Gly Leu Ser Gly Glu Gly Ala Gln Glu
 35           40           45
Gln Ala Arg Ile Asp Thr Gly Ile His Met Lys Arg Met Gln Thr Pro
 50           55           60
Arg His Pro Ala Leu Ser Gln Ser Leu Ile Lys Phe Gly Ile Leu Phe
 65           70           75           80
Asp Pro Ser Ile Phe Phe Leu Glu Thr Gly Ser Arg Phe Ile Ala Gln
 85           90           95
Ala Glu Cys Ser Gly Tyr Ser Gln Ala Pro Leu Glu Arg Thr Ala Ala
100           105           110
Pro Ser

```

<210> 5963

<211> 1288

<212> DNA

<213> Homo sapiens

<400> 5963

```

atggggctgt ttggaaagac ccaggagaag cggcccaaag aactgggtcaa tgagtgggtca
60
ttgaagataa gaaaggaaat gagagttggt gacaggcaaa taagggatat ccaaagagaa
120
gaagaaaaag tgaaacgatc tgtgaaagat gctgccaaaga agggccagaa ggatgtctgc
180
atagttcttg ccaaggagat gatcagggtca aggaaggctg tgagcaagct gtatgcatcc
240
aaagcacaca tgaactcagt gctcatgggg atgaagaacc agctcgcggt cttgcgagtg
300
gctgggtccc tgcagaagag cacagaagtg atgaaggcca tgcaaagtct tgtgaagatt
360
ccagagattc aggccaccat gagggagttg tccaaagaaa tgatgaaggc tgggatcata
420
gaggagatgt tagaggacac ttttgaaagc atggacgatc aggaagaaat ggaggaagaa
480
gcagaaatgg aaattgacag aattctcttt gaaattacag caggggcctt gggcaaagca
540
cccagtaaag tgactgatgc cttccagag ccagaacctc caggagcgat ggctgcctca
600
gaggatgagg aggaggagga agaggctctg gaggccatgc agtcccggct ggccacactc
660
cgcagctagg ggctgcctac cccgctgggt gtgcacacac tcctctcaag agctgccatt
720
ttatgtgtct cttgcactac acctctgttg tgaggactac cattttggag aaggttctgt
780
ttgtctcttt tcattctctg cccagggttt gggatcgcaa agggattgtt cttataaaag
840
tggcataaat aaatgcatca tttttaggag tatagacaga tatatcttat tgtggggagg
900

```

ggaaagaaat ccattctgctc atgaagcact tctgaaaata taggtgattg cctgaatgtc
 960
 gaagactcta cttttgtcta taaaacacta tataaatgaa ttttaataaa tttttgcttc
 1020
 agcacttggc cccattgtag attgcctgt gcagtaaact ttcaagggtg cagctgcccc
 1080
 agattgcttc atttgctggg tgtggaaaga gttgctatgg ccaggcatat gggatttgga
 1140
 agctcagcag aagtgacttc tgctctgtgg ttgctgctcc ccggctttca cagacatggg
 1200
 atggcagcca ttcttttatc tatttaacca agaggatgct ggggaattgt gctgcttgct
 1260
 ctgttggtg gtggctgcat tatgtccg
 1288

<210> 5964

<211> 222

<212> PRT

<213> Homo sapiens

<400> 5964

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Leu | Phe | Gly | Lys | Thr | Gln | Glu | Lys | Pro | Pro | Lys | Glu | Leu | Val |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Asn | Glu | Trp | Ser | Leu | Lys | Ile | Arg | Lys | Glu | Met | Arg | Val | Val | Asp | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Ile | Arg | Asp | Ile | Gln | Arg | Glu | Glu | Glu | Lys | Val | Lys | Arg | Ser | Val |
| | | | 35 | | | | 40 | | | | | | 45 | | |
| Lys | Asp | Ala | Ala | Lys | Lys | Gly | Gln | Lys | Asp | Val | Cys | Ile | Val | Leu | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Lys | Glu | Met | Ile | Arg | Ser | Arg | Lys | Ala | Val | Ser | Lys | Leu | Tyr | Ala | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Lys | Ala | His | Met | Asn | Ser | Val | Leu | Met | Gly | Met | Lys | Asn | Gln | Leu | Ala |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Val | Leu | Arg | Val | Ala | Gly | Ser | Leu | Gln | Lys | Ser | Thr | Glu | Val | Met | Lys |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ala | Met | Gln | Ser | Leu | Val | Lys | Ile | Pro | Glu | Ile | Gln | Ala | Thr | Met | Arg |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Glu | Leu | Ser | Lys | Glu | Met | Met | Lys | Ala | Gly | Ile | Ile | Glu | Glu | Met | Leu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Glu | Asp | Thr | Phe | Glu | Ser | Met | Asp | Asp | Gln | Glu | Glu | Met | Glu | Glu | Glu |
| 145 | | | | | 150 | | | | 155 | | | | | 160 | |
| Ala | Glu | Met | Glu | Ile | Asp | Arg | Ile | Leu | Phe | Glu | Ile | Thr | Ala | Gly | Ala |
| | | | 165 | | | | | 170 | | | | | | 175 | |
| Leu | Gly | Lys | Ala | Pro | Ser | Lys | Val | Thr | Asp | Ala | Leu | Pro | Glu | Pro | Glu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Pro | Pro | Gly | Ala | Met | Ala | Ala | Ser | Glu | Asp | Glu | Glu | Glu | Glu | Glu | Glu |
| | | 195 | | | | 200 | | | | | | 205 | | | |
| Ala | Leu | Glu | Ala | Met | Gln | Ser | Arg | Leu | Ala | Thr | Leu | Arg | Ser | | |
| | 210 | | | | | 215 | | | | | 220 | | | | |

<210> 5965

<211> 1011

<212> DNA

<213> Homo sapiens

<400> 5965

gggaacgggt cttgtggctt tgtctccgc gaagaggaga tggcggagtc gttgaggtct
 60
 ccgcgcgcgt ccctgtacaa actggtgggc tcgccgcctt ggaaagaggc tttccggcag
 120
 agatgcctgg agagaatgag aaacagccgg gacaggctcc taaacaggta ccgccaggct
 180
 ggaagcagtg ggccagggaa ttctcagaac agctttctag ttcaagaggt gatggaagaa
 240
 gagtggaatg ctttgcagnn tcagtggag aattgtccag aagacttggc tcagttggag
 300
 gagctgatag acatggctgt gctggaggaa attcaacagg agctgatcaa ccaagagcag
 360
 tccatcatca gcgagtatga gaagagcttg cagtttgatg aaaagtgtct cagcatcatg
 420
 ctggctgagt gggaggcaaa cccactcatc tgtcctgtat gtacaaagta caacctgaga
 480
 atcacaagcg gtgtggtggt gtgtcagtgt ggccctgtcca tcccatctca ttcttctgag
 540
 ttgacagagc agaagcttcg tgccctgttta gagggtagta taaatgagca cagtgcacat
 600
 tgtccccaca cacctgaatt ttcagtcact ggaggaacag aagaaaagtc cagtcttctc
 660
 atgagctgtc tggcctgtga tacttgggct gtgatcctct agagccagct tggactcaca
 720
 tcattctatg gggttgaaga caactcatc cctctgagga gccttgatca tacaagcctt
 780
 ttatttataa cttattttgt attgaaactt ttaaacaata ctgaagaaaa aaaaactttt
 840
 ccgacatctg ttcttggctt tttgtgacgc aggttgaagg gggaggaata gaaaaagaca
 900
 aactgccttg gaggagataa accaatttta tgtctatcat gttatacaaa aatctagaaa
 960
 taatagattt gtacagaaaa aaatgataat aaatgagaac acaaaacata t
 1011

<210> 5966

<211> 233

<212> PRT

<213> Homo sapiens

<400> 5966

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Asn | Gly | Ser | Cys | Gly | Phe | Val | Ser | Arg | Glu | Glu | Glu | Met | Ala | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Leu | Arg | Ser | Pro | Arg | Arg | Ser | Leu | Tyr | Lys | Leu | Val | Gly | Ser | Pro |
| | | | 20 | | | | | | 25 | | | | | 30 | |
| Pro | Trp | Lys | Glu | Ala | Phe | Arg | Gln | Arg | Cys | Leu | Glu | Arg | Met | Arg | Asn |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Ser | Arg | Asp | Arg | Leu | Leu | Asn | Arg | Tyr | Arg | Gln | Ala | Gly | Ser | Ser | Gly |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Pro | Gly | Asn | Ser | Gln | Asn | Ser | Phe | Leu | Val | Gln | Glu | Val | Met | Glu | Glu |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Glu | Trp | Asn | Ala | Leu | Gln | Xaa | Gln | Trp | Xaa | Asn | Cys | Pro | Glu | Asp | Leu |

tatgctgatg ttcaggcagt cttagcaaag tatgatgata taagcttacc aaagtcagca
 900
 acaatatgct acacagctgc tttgctcaaa gcaagagctg tctctgacaa attctctcct
 960
 gaggctgcat ctcggcgggg gctgagcaca gcagagatga atgcagtaga ggccattcat
 1020
 agagctgtgg aattcaatcc tcatgtgcca aaatacctac tagaaatgaa aagcttaatc
 1080
 ctacccccag aacatatcct gaagagagga gacagtgaag caatagcata tgcattcttt
 1140
 catcttgacac actggaagag agtggaaggg gctttgaatc ttttgattg tacgtgggaa
 1200
 ggcacttttc ggatgatccc ttatcccttg gaaaaggggc acctatttta tccttaccca
 1260
 atctgtacag aaacagcaga ccgagagctg cttccatctt tccatgaagt ctcagtttac
 1320
 ccaaagaagg agcttccctt ctttattctc tttactgctg gattatgttc cttcacagcc
 1380
 atgctggccc tcctgacaca tcagttcccg gaacttatgg gggctctcgc aaaagctgtg
 1440
 agtgtttgcc tagagggagg ccttggggaa tggatgggga aagccaaggg cataaaagca
 1500
 gcgtgagaga aatgggggtg ccttacagaa atgggtacga gcctgcaaag atcattgctc
 1560
 accatttaat tttcatgatc gtcaatggaa tcaaagcatt aaggggtcaa tgagaaagt
 1620
 caggttggtta ctgcatgcct tgccatctt cacaacaaat tcttagcagt ttccaaaaaa
 1680
 tgcaggaggt ccaaaaggat ggaatgattt aggaaatcct agcaaagaa aatgtgtggg
 1740
 aagttactcg gttttctgta aattgaatga cattatttcc aatcgttgga tattgtgggt
 1800
 ctttcc
 1806

<210> 5968

<211> 434

<212> PRT

<213> Homo sapiens

<400> 5968

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Phe | Asn | Gly | Val | Gln | Phe | Val | Cys | Arg | Asn | Leu | Leu | Lys | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Met | Phe | Leu | Asn | Thr | Leu | Thr | Pro | Lys | Phe | Tyr | Val | Ala | Leu | Thr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Thr | Ser | Ser | Leu | Ile | Ser | Gly | Leu | Ile | Leu | Ile | Phe | Glu | Trp | Trp |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Tyr | Phe | Arg | Lys | Tyr | Gly | Thr | Ser | Phe | Ile | Glu | Gln | Val | Ser | Val | Ser |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| His | Leu | Arg | Pro | Leu | Leu | Gly | Gly | Val | Asp | Asn | Asn | Ser | Ser | Asn | Asn |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | |
| Ser | Asn | Ser | Ser | Asn | Gly | Asp | Ser | Asp | Ser | Asn | Arg | Gln | Ser | Val | Ser |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Glu | Cys | Lys | Val | Trp | Arg | Asn | Pro | Leu | Asn | Leu | Phe | Arg | Gly | Ala | Glu |

100 105 110
 Tyr Asn Arg Tyr Thr Trp Val Thr Gly Arg Glu Pro Leu Thr Tyr Tyr
 115 120 125
 Asp Met Asn Leu Ser Ala Gln Asp His Gln Thr Phe Phe Thr Cys Asp
 130 135 140
 Ser Asp His Leu Arg Pro Ala Asp Ala Ile Met Gln Lys Ala Trp Arg
 145 150 155 160
 Glu Arg Asn Pro Gln Ala Arg Ile Ser Ala Ala His Glu Ala Leu Glu
 165 170 175
 Ile Asn Glu Thr Arg His Gln Cys Leu Gly Val His Gln Lys Lys Ala
 180 185 190
 Ser Asn Val Cys Gln Lys Thr Arg Glu Asp Gln Gly Ser Lys Ala Leu
 195 200 205
 Leu Glu Leu Gln Ala Tyr Ala Asp Val Gln Ala Val Leu Ala Lys Tyr
 210 215 220
 Asp Asp Ile Ser Leu Pro Lys Ser Ala Thr Ile Cys Tyr Thr Ala Ala
 225 230 235 240
 Leu Leu Lys Ala Arg Ala Val Ser Asp Lys Phe Ser Pro Glu Ala Ala
 245 250 255
 Ser Arg Arg Gly Leu Ser Thr Ala Glu Met Asn Ala Val Glu Ala Ile
 260 265 270
 His Arg Ala Val Glu Phe Asn Pro His Val Pro Lys Tyr Leu Leu Glu
 275 280 285
 Met Lys Ser Leu Ile Leu Pro Pro Glu His Ile Leu Lys Arg Gly Asp
 290 295 300
 Ser Glu Ala Ile Ala Tyr Ala Phe Phe His Leu Ala His Trp Lys Arg
 305 310 315 320
 Val Glu Gly Ala Leu Asn Leu Leu His Cys Thr Trp Glu Gly Thr Phe
 325 330 335
 Arg Met Ile Pro Tyr Pro Leu Glu Lys Gly His Leu Phe Tyr Pro Tyr
 340 345 350
 Pro Ile Cys Thr Glu Thr Ala Asp Arg Glu Leu Leu Pro Ser Phe His
 355 360 365
 Glu Val Ser Val Tyr Pro Lys Lys Glu Leu Pro Phe Phe Ile Leu Phe
 370 375 380
 Thr Ala Gly Leu Cys Ser Phe Thr Ala Met Leu Ala Leu Leu Thr His
 385 390 395 400
 Gln Phe Pro Glu Leu Met Gly Val Phe Ala Lys Ala Val Ser Val Cys
 405 410 415
 Leu Glu Gly Gly Leu Gly Glu Trp Met Gly Lys Ala Lys Gly Ile Lys
 420 425 430
 Ala Ala

<210> 5969

<211> 429

<212> DNA

<213> Homo sapiens

<400> 5969

cggccgcccc tgtgtgacgt cagggagctg caggcccagg aagccttgca gaacggccag
 60
 ctgggcggcg gggaaggggt cccggatctg cagcctgggg tcttgccag ccaggccatg
 120

attgagaaga tcctgagcga ggaccccccg tggcaagatg ccaacttcgt gctgggcagc
 180
 tacaagacgg agcagtgcc gaagccgcca cgctgtgcc gccagggcta tgcgtgcca
 240
 cactaccaca atagccggga caggcggcgc aacccccggc ggttccagta caggtccacg
 300
 ccctgccccca gcgtgaagca cggggatgag tggggggaac cctcacgctg cgatggcggc
 360
 gacggctgcc agtattgcca ctccgcacg gagcagcagt tccatcccga gatctacaaa
 420
 tctacaaaa
 429

<210> 5970

<211> 143

<212> PRT

<213> Homo sapiens

<400> 5970

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Pro | Pro | Val | Cys | Asp | Val | Arg | Glu | Leu | Gln | Ala | Gln | Glu | Ala | Leu |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | |
| Gln | Asn | Gly | Gln | Leu | Gly | Gly | Gly | Glu | Gly | Val | Pro | Asp | Leu | Gln | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Val | Leu | Ala | Ser | Gln | Ala | Met | Ile | Glu | Lys | Ile | Leu | Ser | Glu | Asp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Pro | Arg | Trp | Gln | Asp | Ala | Asn | Phe | Val | Leu | Gly | Ser | Tyr | Lys | Thr | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gln | Cys | Pro | Lys | Pro | Pro | Arg | Leu | Cys | Arg | Gln | Gly | Tyr | Ala | Cys | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| His | Tyr | His | Asn | Ser | Arg | Asp | Arg | Arg | Arg | Asn | Pro | Arg | Arg | Phe | Gln |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Tyr | Arg | Ser | Thr | Pro | Cys | Pro | Ser | Val | Lys | His | Gly | Asp | Glu | Trp | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Glu | Pro | Ser | Arg | Cys | Asp | Gly | Gly | Asp | Gly | Cys | Gln | Tyr | Cys | His | Ser |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Arg | Thr | Glu | Gln | Gln | Phe | His | Pro | Glu | Ile | Tyr | Lys | Ser | Thr | Lys | |
| | 130 | | | | | 135 | | | | | | 140 | | | |

<210> 5971

<211> 565

<212> DNA

<213> Homo sapiens

<400> 5971

gcgcgcccatt ttcggagagt tcctcagcc ccaggactct ggatgtagcc gttttcatgc
 60
 tgtgaatagc acagtcttcc ctttcatgtg gcactgaagt taaaatgcat agagctcttt
 120
 catgtccctt aggtcagcta agcccacatc agtgtccaaa taggcaacat ccctatttta
 180
 tagatggtca tccccatttt agagatagct cccttttata tccccatttt acaggtgaag
 240
 gaattgaggc acagaagggt aggtcacttc tgcaagatga ccagctgaac caaaatttca
 300

gggcttcaaa caccaaagtgt gttcctttgt cttccgtttc ccacttgctt cccagaggct
 360
 cagcaagtag cctctggcca ctgagcatcc tcccgccac tttgctccct gcctcctgat
 420
 cccaggactg tggccgtgga tgccagagcg aggatgtgaa tcctgttggg ttctgaagcc
 480
 cacacctacc ctgagccttg aagctgcagc aatggctgct tccagatgag cacaccctcg
 540
 ggggtgcangc gtccagtgtc acgat
 565

<210> 5972

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5972

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | His | Arg | Ala | Leu | Ser | Cys | Pro | Leu | Gly | Gln | Leu | Ser | Pro | His | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Cys | Pro | Asn | Arg | Gln | His | Pro | Tyr | Phe | Ile | Asp | Gly | His | Pro | His | Phe |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Arg | Asp | Ser | Ser | Leu | Leu | Tyr | Pro | His | Phe | Thr | Gly | Glu | Gly | Ile | Glu |
| | | 35 | | | | 40 | | | | | 45 | | | | |
| Ala | Gln | Lys | Val | Arg | Ser | Leu | Leu | Gln | Asp | Asp | Gln | Leu | Asn | Gln | Asn |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Phe | Arg | Ala | Ser | Asn | Thr | Lys | Cys | Val | Pro | Leu | Ser | Ser | Val | Ser | His |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Leu | Leu | Pro | Arg | Gly | Ser | Ala | Ser | Ser | Leu | Trp | Pro | Leu | Ser | Ile | Leu |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Pro | Pro | Thr | Leu | Leu | Pro | Ala | Ser | | | | | | | | |
| | | | 100 | | | | | | | | | | | | |

<210> 5973

<211> 797

<212> DNA

<213> Homo sapiens

<400> 5973

gggcccagg ggggctttcc caacactggc cgcagtcatt gttggtataa cggctagaga
 60
 cgcccagtga gtttagcatgg agggcagtgg gaccggaaaa agacgtggaa aagctgcgaa
 120
 aacgagcctt cgaatcatgg acgcgcgggc ccagctcctc ctccgagttc ctcatccggg
 180
 gccgtcactc acatccgggg cctcactca catccgggac cctcatccgg ggctctcacc
 240
 cacatccggg accctcatgc ctgggcggag gagggggggc ccttcattcg ggacccctgc
 300
 actccgtcgc cggaagtgcc accgagaagc gccggcctcg gggctgtcta cagcggcccc
 360
 ggagaggctg tgggtggccc gagcgcgagt gtgtaggtga caggacagcg gccaggcccc
 420
 cccctccctt cggtagtac ccggaagccg ttttggggtc gcagcggggg ggcagcttgt
 480